"Crystallizing Good Times in Your Town!" and—How to Hook-Up Radio Outfits

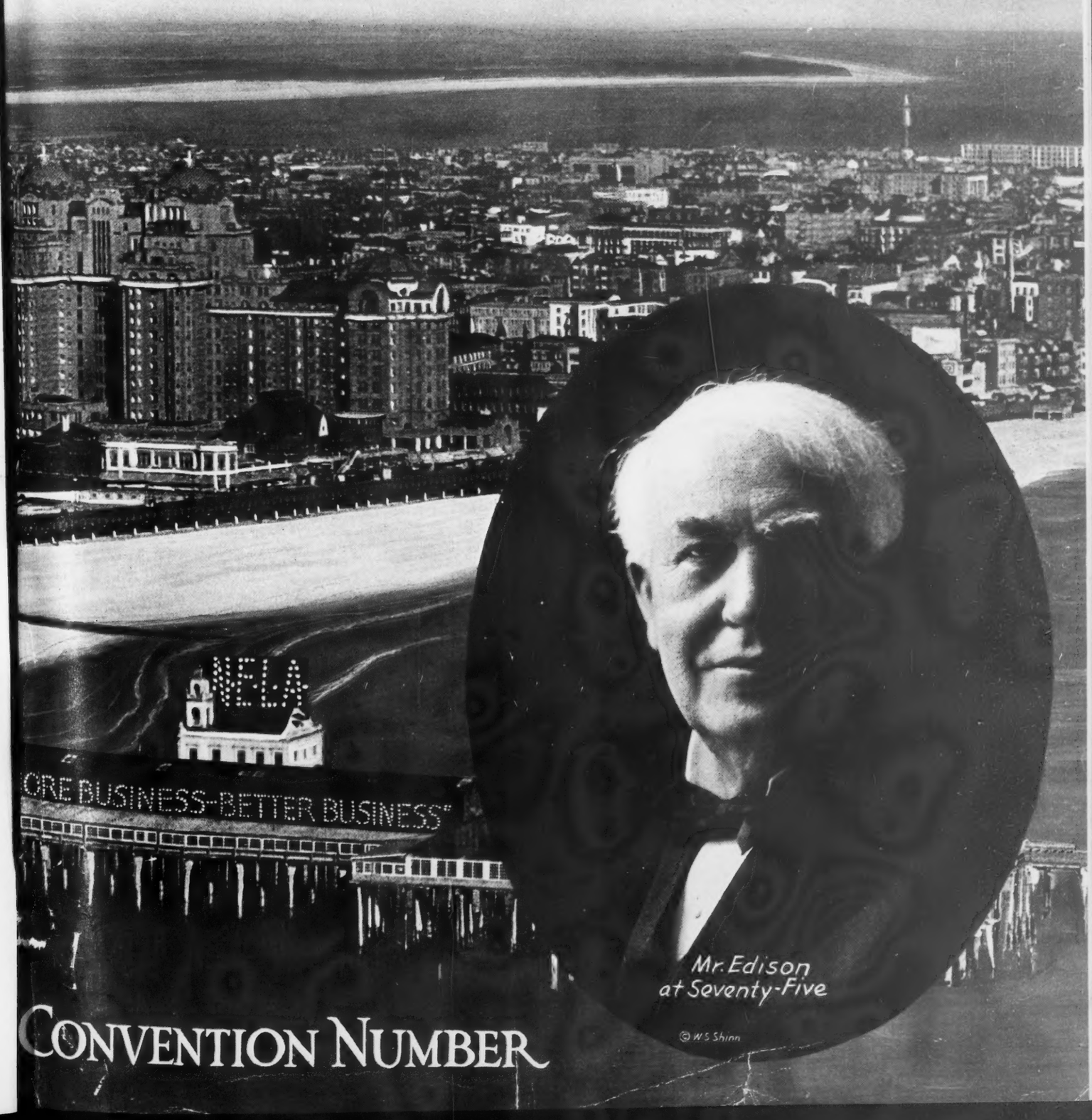
MAY 4 1922
Engineering Library

May, 1922

25 Cents

Electrical Merchandising

McGraw-Hill Company, Inc.



CONVENTION NUMBER

Firing the first guns for "Better Lighting—Better Business"

the campaign that means more business for you

TODAY the merchants in your city are wondering how to increase sales and reduce selling costs. *Tell them: "Better Lighting."*

Seven out of every ten of those merchants are losing sales and increasing selling expense because of their present lighting. *Sell them Better Lighting.*

Selling Better Window and Store Lighting this year means more business for you—and the best kind of business. For when you sell Better Lighting to a merchant, you sell:

1. **Show window reflectors.**
2. **Color attachments.**
3. **Spotlights.**
4. **Fixtures (Glassware, sockets, holders, etc.)**
5. **Wire.**
6. **Conduit.**
7. **Outlet boxes.**
8. **Panel boards.**
9. **Switches.**
10. **Edison MAZDA Lamps.**

* * * *

Every resource of our Advertising and Sales Departments is at your service to help you sell better window and store lighting. We have prepared a complete campaign for the use of those Edison MAZDA Lamp Agents and Distributors' salesmen who are ready to go after this business. For particulars, write at once to our district office serving you.

EDISON
MAZDA LAMPS

EDISON LAMP WORKS OF GENERAL ELECTRIC COMPANY

Electrical Merchandising, May, 1922. Vol. No. 27. No. 5. Published monthly. McGraw-Hill Co., Inc., $2.00 per year, 25 cents a copy. Entered as second-class matter July 21, 1916, at the Post Office at New York, under the Act of March 3, 1879.

A Great Step Forward —The New Eden

IN 1919, with the introduction of the "EDEN" Swinging Wringer Model, we published a number of enthusiastic letters from our distributors throughout the country.

Now, in 1922, with the introduction of the "NEW EDEN" it is with considerable pride that we refer dealers to this same list of distributors:

Wetmore Savage Co. of Boston
Milner-Flower Co., Inc. of Buffalo
Electric Devices Co. of Newark
Fobes Supply Co. of Portland
The Erner Electric Co. of Cleveland
Domestic Electric Co. of St. Louis
Duluth Electric Supplies Co. of Duluth
Electric Supply Co. of New Orleans
Hatfield Electric Co. of Indianapolis
Electric Appliance Co. of San Francisco
Electric Shop Co. of Akron
Central Electric Co. of Detroit
United Appliance Co. of Jackson
Zion Co-operative Mercantile Institute of Salt Lake City
Domestic Appliance Co. of Kansas City
Fobes Supply Co. of Seattle
Eden Appliance Co. of Chicago
Milnor Electric Co. of Cincinnati
Woodill & Hulse Elec. Co. of Los Angeles

To have retained the good will and cooperation of all of these sterling accounts through the trying business depression of the last two years is, we believe, a most gratifying achievement.

We feel that we are fully justified in describing the "NEW EDEN" as the first *Electric* Washing Machine because it is run, controlled and protected automatically by electricity. We have added an automatic control circuit breaker and starting switch in place of the usual mechanical protective devices.

In the Dominion of Canada,
The Canadian General Electric Company
Main Offices: Toronto, Ont.

The NEW Eden

At Last—an ELECTRIC

The NEW EDEN is the First Electrically

New Solid Aluminum Hinged Wringer. The top roll hinges back as soon as release handles are operated and leaves the wringer open. Rolls easily removed.

Release Handles. A slight touch instantly and completely removes all pressure from the rolls and releases tension springs. Tension can again be applied to the rolls without loosening tension screws.

Guides. Highly polished aluminum guides.

Automatic Interlocking Swinging Wringer. Always an "EDEN" feature. Aluminum housing.

Tension Springs. Specially constructed tension springs allow the wringing of either heavy or light articles without readjustment.

Combination Switch and Automatic Circuit Breaker. This controls the current, eliminating mechanical clutches and provides for direct drive. This device cuts off the current when the operation of the machine is interfered with by mechanical overload, stalling the wringer, or by any current interruption, and allows only intentional starting of the machine as electrical contact is not made unless switch is turned and released. Motor starts on 40% less amperage.

Large Polished Aluminum Start and Stop Control Handle, to operate washer unit and cylinder.

Washer Unit Reversing Mechanism. Die cast aluminum housing.

Unit System of Power and Drive Mechanism. Oil-less bronze graphite bearings used throughout.

Reduction Unit. Noiseless worm gear reduction unit, with hardened Worm and Bronze Gear running in oil.

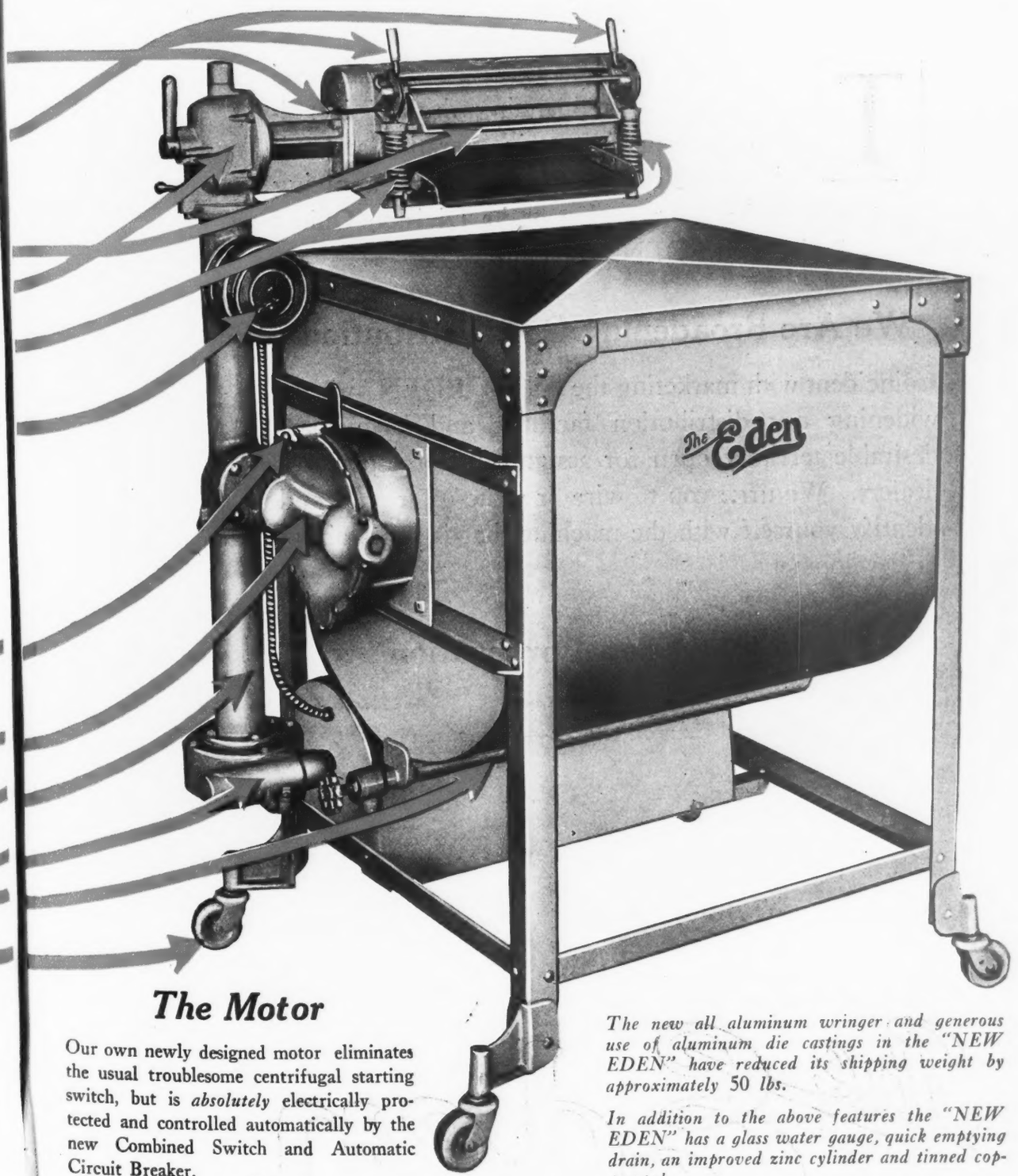
Sediment Zone. The sanitary sediment zone—an Exclusive "EDEN" feature.

Casters. Two and one-half inch pressed steel, round cornered casters—easy rolling.

The NEW Eden

Washing Machine

Protected and Controlled Washing Machine



The Motor

Our own newly designed motor eliminates the usual troublesome centrifugal starting switch, but is *absolutely* electrically protected and controlled automatically by the new Combined Switch and Automatic Circuit Breaker.

The new all aluminum wringer and generous use of aluminum die castings in the "NEW EDEN" have reduced its shipping weight by approximately 50 lbs.

In addition to the above features the "NEW EDEN" has a glass water gauge, quick emptying drain, an improved zinc cylinder and tinned copper tub.

And A New Financing Plan Too—

THE GILLESPIE EDEN—Commercial Credit Plan for financing dealers' installment time sales is now in operation and full information can be had on request by applying to Gillespie Eden Corporation or its Division Offices or any Authorized EDEN Distributor.

We Are Broadening Our Distribution

Coincident with marketing the "NEW EDEN" we are widening our distribution facilities and have some desirable territory open for assignment to responsible dealers. We urge you to wire or write us at once and identify yourself with the machine that is years ahead in development.

Gillespie Eden Corporation

Branch Offices:

New York Pittsburgh St. Louis San Francisco

Factories and General Offices—Paterson, N. J.

The NEW Eden

You Can Use this Book—

In Getting Better Lighting Effects More Cheaply

You fixture and Lighting men who are looking for a combination of high lighting values with real beauty in glassware should investigate the qualities of Luna Glass. This is a beautiful alabaster type of glass with high diffusion and no glare.

Our catalog shows the utilization of this beautiful glass in many new and unusual numbers.

It will put you under no obligation to let us send you a copy. A line on your letterhead is all that is necessary and may result in many new lighting ideas for you.

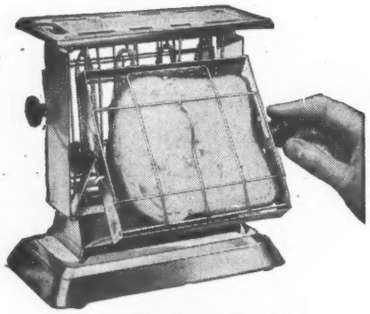
H. Northwood Co.
Wheeling,
West Virginia

ILLUMINATING GLASSWARE GUILD
SHADE LIGHT SAVE SIGHT
USE GLASS

Luna Glass

Manning-Bowman Quality Ware

Therefore *He Buys Most He Sells Most*



Reversible Door Toaster
Nickel Plated

No. 1225. As illustrated..... $8.00
No. 1226. With Toast Rack..... 8.50

It toasts a full slice of bread without trimming. It toasts quicker. It turns the toast.

Percolator Set. No. 133930. 4 pieces. $70.00

Heavily Silver Plated on Nickel Silver. Repousse chasing. Butler finish. The latest M-B Percolator Set.

He buys most who buys the best in more than one sense of the word. Not only does he get more for his money, but he buys oftener because he is satisfied by what he buys.

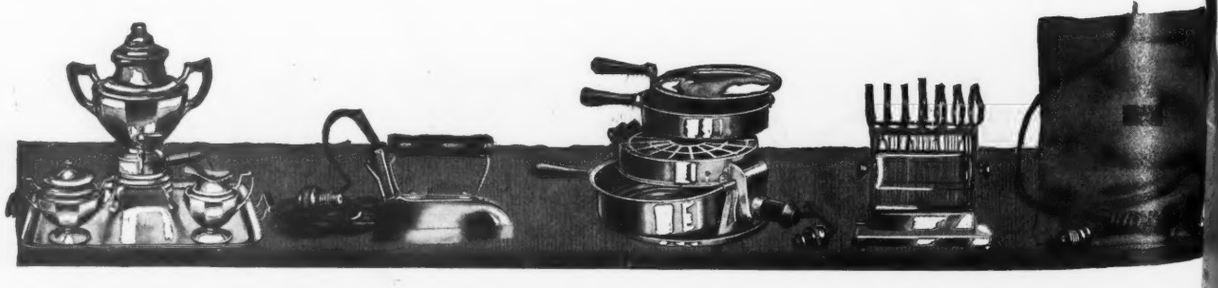
In the same way the dealer who sells the best, sells the most for a satisfied customer always comes back.

For more than fifty years Manning-Bowman & Co. have held steadfastly to the "Quality First" policy. In this, although we have greatly increased our facilities and capacity, there will be no change.

Sell Manning-Bowman Quality Ware first and you will sell it always.

Manning-Bowman & Co., Meriden, Conn.
New York Chicago San Francisco

"Means MB Best"



Manning-Bowman Quality Ware

Who Buys the Best Who Sells the Best

The Manning-Bowman Percolator is a distinct advancement in Electric Percolator construction. Its features are a new unit—a new Thermostat—a new silent-valve.

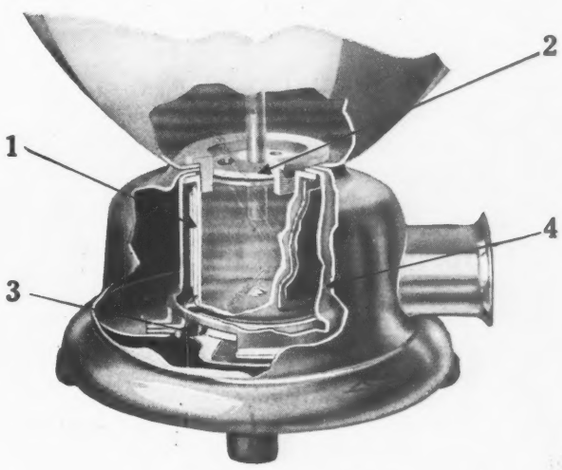
The M-B automatic switch never works at the wrong time and never fails at the right time. Sell the best and plan your sales effort to hitch up to our advertising campaign in such mediums as *Ladies' Home Journal, Good Housekeeping*, etc.

Get from the M-B distributor in your district the outline of our advertising campaign, see these new percolators and convince yourself.

Manning-Bowman & Co., Meriden, Conn.
New York Chicago San Francisco

"Means MB Best"

At Last—
A Perfect Percolator



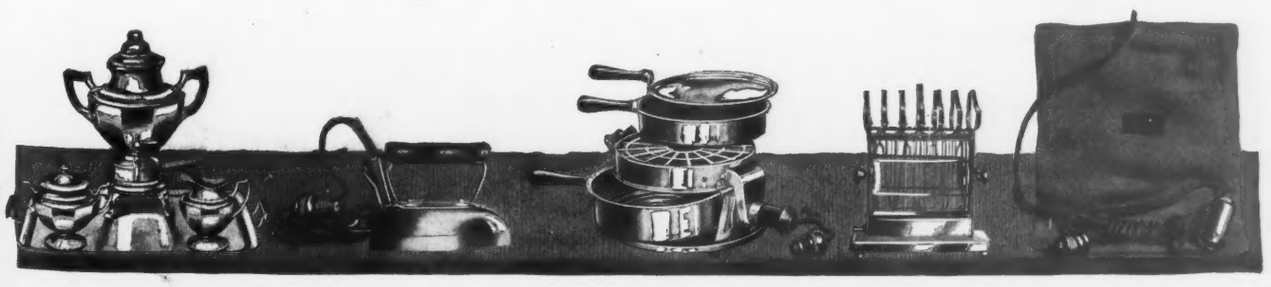
Electric Unit
Sectional View

1. HEAT WHERE YOU WANT IT
Immediate percolation

2. SILENT PERCOLATING
No rattling or sputtering

3. AUTOMATIC SWITCH
Prevents damage if percolator boils dry.

4. SLEEVE—Confines heat and protects finish. Absolutely protected from damage if the percolator boils dry. An automatic thermostatic cut-off switch shuts off the current before the device can be damaged.



"What are these lumens, Sam?"

"Lumen is the scientific unit of measure for quantity of light."

"How do you calculate lumens?"

"Very simple, Chief. Bill's drafting board has 15 square feet of surface and the foot-candle meter shows an average of 20 foot-candles on the board. 15 x 20 = 300 useful lumens."

"And we can buy lamps to go with our Cutter R.L.M. Reflectors according to how many lumens we require on each desk or bench."

"Exactly, Chief. We're buying them, now, from the

Westinghouse Lamp Company
165 Broadway, New York City

Sales Offices and Warehouse Throughout the Country

For Canada
Canadian Westinghouse Co., Limited
Hamilton, Ontario

W
Westinghouse Lamps.

Westinghouse

Westinghouse Glue Pots Represent a New Opportunity for Quick Profits

Plant managers and superintendents are just beginning to realize the value of the Electric Glue Pot as a time and labor saver.

Westinghouse National Advertising is now being trained on these executives. It opens the way to many easy and profitable sales for you.

If you are in a territory where there are wood working industries, planing mills or pattern makers, the way is open for immediate business.

New uses for Electric Glue Pots are being discovered every day, opening up many untouched fields.

Get our Agent-Jobber to help you put this new business on your books.

This ad will reach the men you want to sell. It will appear in May in Factory and Manufacturers Record. Follow up its appearance in the magazines with a personal call. In this way it will net you many immediate sales.

Westinghouse Electric & Manufacturing Company
Mansfield Works, Mansfield, Ohio
Sales Offices in All Principal American Cities

Westinghouse

Show Your Customers the M Iron's Big Points of Leadership

Westinghouse Agent-Jobbers

ALANTA, GA., Gilham Schoen Electric Co.
BIRMINGHAM, ALA., The Moore-Handley Hardware Co.
BLUEFIELD, W. VA., Superior Supply Co.
BUFFALO, N. Y., McCarthy Bros. & Ford
BUTTE, MONT., The Montana Electric Co.
CHICAGO, ILL., Illinois Electric Co.
CINCINNATI, OHIO, The Johnson Electric Supply Co.
CLEVELAND, OHIO, The Erner Electric Co.
DENVER, COLO., Mine & Smelter Supply Co.
DETROIT, MICH., Commercial Electric Supply Co.
EL PASO, TEXAS, Mine & Smelter Supply Co.
EVANSVILLE, IND., The Varney Electrical Supply Co.
HOUSTON, TEXAS, Tel-Electric Co.
HUNTINGTON, W. VA., Banks Supply Co.
INDIANAPOLIS, IND., The Varney Electrical Supply Co.
JACKSONVILLE, FLA., Pierce Electric Co.
KANSAS CITY, MO., Satterlee Electric Co.
LOS ANGELES, CAL., Illinois Electric Co.
LOUISVILLE, KY., Tafel Electric Co., Inc.
MEMPHIS, TENN., Riechman-Crosby Co.
MILWAUKEE, WIS., Julius Andrae & Sons Co.
NEW HAVEN, CONN., Hessel & Hoppen Co.
NEW ORLEANS, LA., Electrical Supply Co.
NEW YORK, N. Y., Northwestern Electric Equipment Co.
OKLAHOMA CITY, OKLA., United Electric Co.
OMAHA, NEB., The McGraw Co.
PHILADELPHIA, PA., H. C. Roberts Electric Supply Co.
PITTSBURG, PA., Robbins Electric Co.
PORTLAND, ORE., Fobes Supply Co.
RICHMOND, VA., Tower-Binford Electric & Mfg. Co.
ROCHESTER, N. Y., Rochester Electrical Supply Co.
SALT LAKE CITY, UTAH, Intermountain Electric Co.
SAN FRANCISCO, CAL., Electric Rwy. & Mfrs. Supply Co.
SCRANTON, PA., PENN Electrical Engineering Co.
SEATTLE, WASH., Fobes Supply Co.
SIOUX CITY, IOWA, The McGraw Co.
SPOKANE, WASH., The Washington Electric Supply Co.
ST. JOSEPH, MO., Columbian Electrical Co.
ST. LOUIS, MO., Central Telephone & Electric Co.
ST. PAUL, MINN., St. Paul Electric Co.
SYRACUSE, N. Y., H. C. Roberts Electric Supply Co.
TAMPA, FLA., Pierce Electric Co.
TULSA, OKLA., United Electric Co.
WICHITA, KANSAS, United Electric Co.

Feature the M Iron—the Iron that women designed.

It is every inch a leader from the tip of its shiny beveled point to its handy grip plug. The beveled edge, an exclusive feature, permits the user to look directly down on the work; the broad ironing surface enables a greater volume of ironing to be handled more quickly; the ironing surface heats quickly and evenly; the plug and handle are specially designed for greatest convenience.

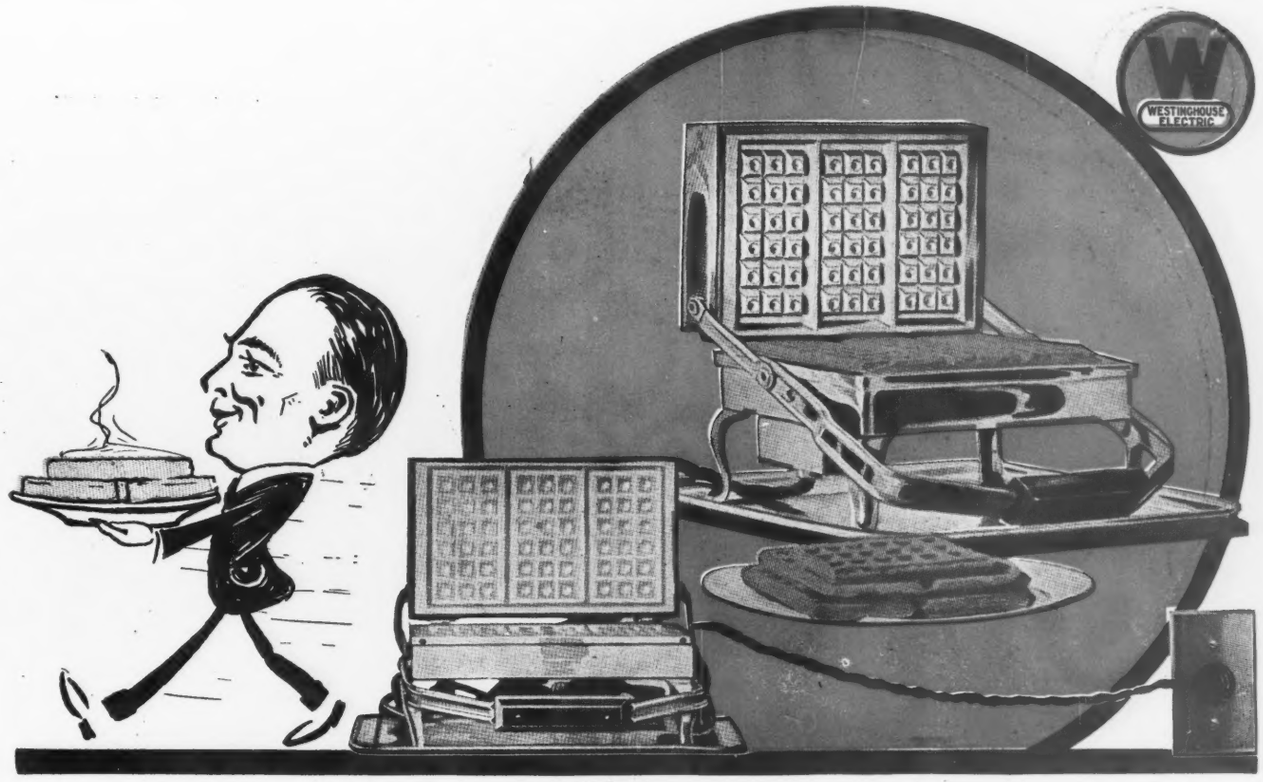
You'll find that these are the features women are looking for in irons.

Point them out today and you will reap the benefits in an increasing volume of sales.

Our Agent-Jobber will gladly show you the M iron and explain its advantages.

Westinghouse Electric & Manufacturing Company
Mansfield Works, Mansfield, Ohio
Sales Offices in All Principal American Cities

Westinghouse



And Use Actual Store Demonstration to Help You Sell Waffle Irons

If you are not serving your customers waffles made the Westinghouse way, you are failing to use one of the best of selling helps.

The Westinghouse Waffle Iron makes deliciously crisp waffles. As no grease is used there is no smoke and the waffles may be made at the table.

At a minimum of expense and trouble you can give convincing demonstrations of the economy, convenience and cleanliness of electric waffle cooking.

Make waffles in your store and serve them to your customers.

—and don't forget that one of the easiest ways to get women to buy is to show them the new cooking possibilities of the Westinghouse Waffle Irons.

You should have copies of Folder 4490, "Delicious Recipes Waffle-ized" to distribute among your women customers. It tells how to use the waffle iron to make thirty new and delicious dishes. Get a supply from our Agent-Jobber today.

Westinghouse Electric & Manufacturing Company
Mansfield Works, Mansfield, Ohio
Sales Offices in All Principal American Cities

Westinghouse

You Can Have Even Greater Success in Your Territory with Little Sales Effort

The extraordinary success of the dealers who have used the Westinghouse Plan, proves its value and its ability to get results.

What other dealers have done—you can do.

In practically every household in your town there are many tasks which Westinghouse small motors can perform—freeze ice cream, polish silver, grind coffee, etc. Then there's the man who likes to "tinker." He will want a Westinghouse small motor to run his lathe, scroll saw and grind his tools.

Complete sales helps are provided to help you get this business. There is an attractive window display card and a small motor booklet entitled "Popular Motor Mechanics" which shows many everyday uses for small motors in office, home and shop.

This booklet is so attractively arranged that it will arouse the interest of the customer and prompt him to take a copy home.

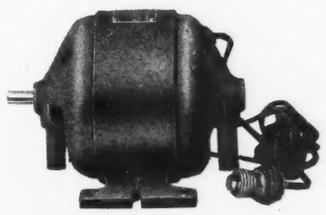
Our Agent Jobber has this material on hand. Get in touch with him at once and ask him for copies of "Popular Motor Mechanics" and "Merchandising Motor Ideas" which explains the Westinghouse Plan.

Folder No. 4482
"Popular Motor Mechanics"

Westinghouse Electric & Manufacturing Company
East Pittsburgh, Pa.
Sales Offices in All Principal American Cities

Westinghouse

Dealers Are Getting Great Results with the Westinghouse Small Motor Merchandising Plan



The Westinghouse Trouble-Proof Motor means Sales without Service because of these features—

—Splash-proof
—High starting effort
—Will withstand overloads
—No brushes, or sliding contacts
—No alterations are required to equip the driven machine for a-c or d-c service.
—Either two or four bolts used in mounting
—Either wall or ceiling mounting
—Thorough ventilation
—Large shaft bearings and grease cups

Dealers in widely separated sections of the country who are selling small motors under the Westinghouse Plan, are having universal success.

In Boston, a dealer sold seventy-five Westinghouse small motors in six weeks.

A Chicago dealer moved ten motors the first day of his campaign.

Three live dealers in Los Angeles started out to develop their latent small motor market through the use of the Westinghouse Plan. They sold forty small motors the first week—then came right back the second week and got rid of thirty more.

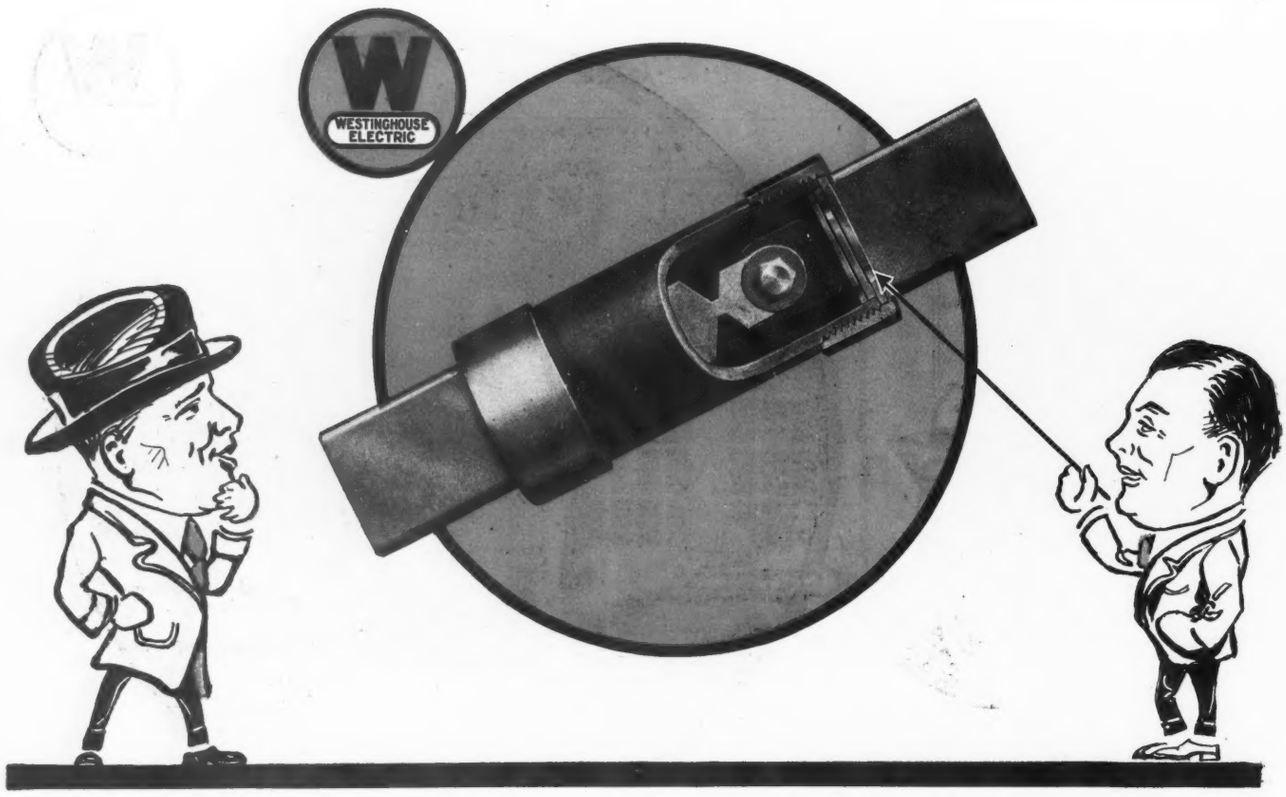
Other dealers in the Los Angeles Territory took up the plan and after being swamped with nearly 250 orders, had to remove their window trims to prevent further inquiries and orders until the immediate demands could be filled.

These cases are typical of the success which dealers everywhere are having in the merchandising of small motors

Why not exploit your own small motor market? Our Agent Jobber has full information and will gladly help you.

Westinghouse Electric & Manufacturing Company
East Pittsburgh, Pa.
Sales Offices in All Principal American Cities

Westinghouse



Shurvent's Positive Venting Path Gives Real Protection

Shurvent is the fuse to use in bolstering up your sales.

It is THE renewable fuse with a scientifically designed path for venting and cooling of gases.

Their passage to the outer air through this venting path is retarded sufficiently to accomplish two things: (1) cool the hot gases so that they leave the fuse at a safe temperature; (2) give just enough pressure in the tube to quench the arc effectually without damage to the casing.

This feature insures maximum protection and safety in operation.

Call the attention of your industrial customers to this new fuse. They will appreciate its advantages at once.

Don't fail to point out the fact that, as no gases escape along the threads, there is no burning of these threads nor will the ferrule freeze to the casing.

Shurvent fuses are fully approved by the Underwriters' Laboratories in all capacities up to and including 600 amps., 250 and 600 volts.

Folder 4472 explains in detail this sensational advance in fuse construction. Every electrical man should have a copy and know all about Shurvent and the added protection it brings.

Westinghouse Electric & Manufacturing Company
East Pittsburgh, Pa.
Sales Offices in All Principal American Cities

Westinghouse

Electrical Merchandising

Volume 27 — The Monthly Magazine of the Electrical Trade — Number 5

With which is incorporated *Electrocraft*

May, 1922

The Death Knell of the Bargain

AN OFFICIAL of the United States Chamber of Commerce has voiced a new note in the chorus of good business advice that is in the air these days. The open season for bargain sales is over, he says. And he is right.

We of this generation have ever lived and had our business in a rising market. Prices have been slowly, steadily working up. Goods bought today have been worth more tomorrow, and held awhile could be sold as a bargain, or the loss made up on some other line increasing in value. That has not been the ordinary basis of the bargain sale but it has been a working element in our methods and state of mind. But times have changed. We have a falling market now. We will continue to operate on a falling market perhaps for twenty years or more. And we will have to change our selling habits somewhat and our thinking to conform. And one of the changes must be a new attitude towards bargain sales.

BARGAINS have become a habit with both buyers and sellers. Bargains have been exploited in direct opposition to an economic fact that can't be downed. Bargains say, "We sell things to you for less than they cost. We don't mind losing money." But you can't dodge facts. You can't play puss-in-the-corner with arithmetic. And in these changed times the merchant must lay down his camouflage, come out of the bushes and be frank and honest about his goods, his costs and his prices—honest not only with his customers but with himself.

The retailer stands before the country today accused of profiteering. "The cost of living and the cost of manufacturing have come down," says the man on the corner, "but the storekeeper keeps up his prices because he can." And, wrong or right, he is a profiteer in that man's mind. Therefore the merchants of the U. S. A. have got to do something that will restore the public confidence. And nothing will help him do this as effectively as to establish a free and frank policy of giving the customer his money's worth—no more, no less—on all goods sold, with quality clearly defined and openly based on value. For while the public remain suspicious, it means loss and hardship to the merchant. He is accused of making too much. It will, therefore, pay the retailer to come before his customers and prove his case, for when the man who buys appreciates a little more just what it costs to sell, his feeling of suspicion will be changed to one of natural friendly sympathy and understanding.

THE merchants themselves instituted bargains as a feature of selling. Now, when the bargain has become an economic impossibility unless balanced constantly with overpricing, which in a falling market cannot be maintained, the people are expecting and demanding bargains and more bargains because they know that prices are going down. The sooner that the retailer comes out and lays his cards upon the table and frankly takes his customer into his confidence on the details of this business of theirs, the better it will be for both.

McGRAW-HILL COMPANY, INC.
Tenth Ave. at 36th St., New York

Cable Address: "Machinist, N. Y."

WASHINGTON, Colorado Bldg.
CHICAGO, Old Colony Bldg.
PHILADELPHIA, Real Estate Trust Bldg.
CLEVELAND, Leader-News Bldg.
ST. LOUIS, Star Bldg.
SAN FRANCISCO, Rialto Bldg.
LONDON, 6 Bouverie St., London, E. C. 4.

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American Machinist — **Power**
Chemical and Metallurgical Engineering
Engineering and Mining Journal-Press
Coal Age — **Ingeniería Internacional**
Bus Transportation
Electric Railway Journal
Electrical World — **Electrical Merchandising**
Journal of Electricity and Western Industry
(Published in San Francisco)
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Circulation of this issue, 14,200

One Flag, One Country;
One Voltage, One Frequency;
and One Kind of
Attachment Plug!

ELECTRICAL MERCHANDISING

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Frank W. Smith

First Subscriber to *Electrical Merchandising*
First Vice-President National Electric Light Association
First Vice-President and General Manager United Electric Light and Power Company, New York City, and
First to propose N. E. L. A's "More Business—Better Business" Campaign

Mr. Smith shows how each month he devotes an evening at home to following up the latest commercial and selling ideas in the current number of Electrical Merchandising. Mr. Smith goes through each issue carefully, from cover to cover, making notes and marking particular references for the department heads who are in charge of sales, advertising, merchandising, customers' relations, accounting, etc., for the United company—the $50,000,000 public utility of which Electrical Merchandising's Oldest Subscriber is the active directing head.

Electrical Merchandising
The Monthly Magazine of the Electrical Trade
With which is incorporated ELECTRICAL MERCHANDISE
Volume 27 May, 1922 Number 5

Four Conventions—

Let's Key Them All for "More and Better Business" in 1922

FOUR important conventions of national electrical bodies will be held during the five weeks beginning with the Atlantic City gathering of the National Electric Light Association the middle of this month. These conventions and their dates are:

National Electric Light Association, Atlantic City, N. J., May 15 to 19
National Electrical Credit Association, Detroit, May 18 to 19
Electrical Supply Jobbers Association, Hot Springs, Va., May 22 to 26
Associated Manufacturers of Electrical Supplies, Spring Lake Beach, N. J., June 19 to 23

IN arranging the programs for these electrical gatherings, it is to be hoped that the growing optimism now seen reflected on every hand in general business conditions will be so thoroughly injected into the various convention sessions themselves that everyone present will come away filled with this spirit of progress.

For undoubtedly business in general has turned the corner. Industry as a whole is steadily pulling into the upgrade. Building has started. Orders are coming in in greater volume, month after month. The farming situation is getting better. Money is easier.

The public-at-large is ready for an aggressive selling program on the part of the electrical industry. The only question is whether the electrical industry is itself ready to "*go out and go after*" the waiting business. Within the trade's own ranks a timely call has already been sounded in the slogan—"More Business—Better Business." And a splendid great tool now stands ready to help the industry get the job done in the reorganized staff of the Society for Electrical Development, under Mr. Goodwin.

The stage seems set for a great year of electrical business. It will help all of us to materialize these prospects if the underlying note of general optimism and opportunity, already perceived by those in a position to view business affairs broadly, is also put plainly in evidence to every delegate at each of the forthcoming conventions. We need to build, at these national electrical gatherings of 1922, a spirit of business encouragement and aggressiveness which can be brought back and energetically put to work in every man's own town!

Crystallizing Good Times in Your Town

The Business-Development Movement, and What it Means to You—A Picture of the Situation—How the Plan is Shaping Up—Why the Central-Station Man Must Lead Out—And Where the Individual Comes In

EVERY MAN in the electrical industry is interested to know what the big business development plan of the N.E.L.A. is going to mean to him—the individual. What is the "big idea," where do the dealer, contractor, jobber, and manufacturer come into it? Who is going to do the work? Can such a plan be carried through? All in all, it is the most important situation before the electrical industry today—more important than costs, than profits, than industry politics—because in a word it focusses upon the opportunity from which each one of us expects to win his measure of prosperity and restore himself after the losses and the disappointments of the last two years. So each one wants to find his place in it and get the picture clear.

Electrical Men Not Ready

The first question to set up and shoot at, of course, is this—Do the conditions in the industry demand such a promotion movement and do conditions in the country justify it? And the answer undoubtedly is—yes.

Good times are coming back again to the U.S.A. We all see it. We all believe it. We are all waiting eagerly until we are quite sure the time is right to go ahead. Every newspaper bears optimistic tidings. Business is improving surely. The cost of living is gradually slowly scaling down. Building construction is increasing steadily. Things are looking up. The people want only a full confidence that it is safe before proceeding to buy all those things they have been waiting for, including an infinite number of electrical installations, equipment and appliances. The market will be there—enough for all.

But the electrical industry is not ready for this market. Central stations have cut down their selling staff, until they either have no sales departments at all or they are little more than skeletons of what they must become if they are to make good the fast unfolding opportunity. Contractors have had their interest drawn away from wiring during the years when the war had stopped all building, and there was little wiring to do, and in their busy-ness over appliance selling have forgotten that their prime function is the installation of complete electric service in the home, the store, the office, and the factory. For 5,350,000 unwired homes still wait along existing central station lines representing a population 70 per cent as great as that which the electrical industry today is serving in the homes already wired—while 8,000,000 more wait beyond the reach of present wires.

Milan R. Bump, president of the N.E.L.A., who launched the Big Idea upon the industry at a meeting in January, where men of all branches of the industry were present. "There is no such thing as saturation in the electrical industry," declares Mr. Bump. "The electrical business is on the verge of the biggest business it has ever known. The only limit to our growth and expansion is our own man-power."

This is the job the contractor must do, and the dealers and the central station shops must sell the appliances needed to equip these homes and the proportionate number of the other buildings still unelectrified. But we all know that they are not geared up to it today. We have not yet recovered from the habits of several war years of selling to an eagerly grasping market, where the salesman got to be more of a receiving teller than a creator of business. And when the slump came and took all of this easy picking out of our joyous lives, the shock upset our dispositions, and we have not yet reorganized ourselves to do our job under old time conditions, where before a man can sell he must make people want his goods.

Why the N.E.L.A. Started It

The manufacturer and the jobber stand in the self same position. Instead of a gallery of customers all clamoring for goods they find today surrounding them just territory where they can go out and build up business in the old time way. But they have not quite come to the state of mind where they and all their men accept it and consider it all right and natural and permanent, and are content to go to work that way.

So there you have the picture—the country ready and the electrical industry not ready. And this big business development movement that is being initiated by the National Electric Light Association, is a recog-

nition of these plain facts to all of us and every kind of electrical man in every town must get into it and contribute his part to the effort if the job is to be done well.

The N.E.L.A. has led off because in such a situation the central station man *must* play a leading part, both in responsibility and in hard work. In every town the central station must get ready by the re-establishment of its sales staff and the rebalancing of its commercial policies as necessary, before the local expression of this great national monument can be organized and applied. So to give action to the thought, the meeting was called by President Bump on January ninth with men of all groups of the industry attending and the idea was discussed and endorsed and the Joint Committee for Business Development was created. And the committee has step by step proceeded with the upbuilding of the plan.

The Plan, in a Word

What is the plan? In a word, the real objective of this movement is to carry to the people of America and sell to them a confident belief that good times are not only coming but are already here to be made the most of and to organize this confidence into a willingness to build and buy. The slogan first suggested for the campaign was "More Business—Better Business" but it was not right. For the electrical industry is not going to the people with an appeal that means merely "Buy my goods!" Rather is the first message—"Electrify—for Better times!" And the electrical men in each community will set an example in new confidence that will communicate itself to all the town. By cheerfully, expectantly and persuasively setting to work full speed to sell to every one—to electrify industries, to electrify homes, to electrify stores, offices and farms—he will quicken the pace of local business and restore his own prosperity. Not as a campaign to last but a short while, but as a continued movement to build up the electrical business and the electrical industry to where it is serving, not a third of the people of America, but all of them—their homes and business places.

H. A. Lane, of Oklahoma City, the young Lochinvar (but not too young) who has come out of the West to head up the movement for the N.E.L.A. and do his bit (which is a lot), to make it bring good times for all of us.

The success of this movement must of course, be expressed in actual business. The function of the N.E.L.A. nationally is to lead out and point the way and start the work, and try to get the help of every other national influence that can contribute in any way. It will be the function of the local central stations to take the initiative in starting the local work, in the same way, by proceeding at once to build up an active selling force of its own and by calling together all the other local electrical interests to organize the local program and the local work.

All Groups Concerned

What is this national work that must be done?

We have in this industry four kinds of electrical men representing the interests of central stations, manufacturers, jobbers and contractor-dealers. They are organized into groups and they operate as groups. Representing these four classes of electrical men we have several associations. These are class associations with large membership. They are discussional bodies. They work by committees and the limit of power in committee work is usually to develop information and to determine policies.

Each of these classes of electrical men is concerned in this new business opportunity, and this movement to awaken and revitalize the industry commercially. Each of the group associations is interested. There is a common purpose that appeals to all of us and every kind of electrical man in every town must get into it and contribute his part to the effort if the job is to be done well.

Therefore it is everybody's job. The N.E.L.A. in its initial organizing committee has ten central station men, eleven manufacturers, three jobbers and one contractor. This

This is the trained staff of the Society for Electrical Development—bigger, better and busier—that has been enlisted in the promotion of this electrical business-development crusade. The Society was set up, originally, as the factory where practical cooperative promotion work for the whole industry could be done. Because the war came, the present is the first time that a big job of commercial electrical development has been possible and this trained staff is ready to assist the Joint Committee.

"Joint Committee" has formed four other committees with mixed membership to develop four "guide books" for the use of local organizations in local work, one each on lighting appliances, industrial power and wiring, with a commercial development committee and an advisory committee on publicity on which are representations of the electrical press. Mr. H. A. Lane, who has gained a national reputation as the executive of the Oklahoma state electrical organization and for his former work with the Alaska-Yukon and Pan-American Expositions, has been put in charge of the movement for the N.E.L.A.

Where the Society for Electrical Development Comes In

But to permanently represent all these classes of electrical men and to receive, co-ordinate, apply and promote these policies to the common purpose and the common interests of the industry, of course, some neutral agency is needed that can provide a working organization capable of carrying out a five or ten-year program. Fortunately, the reorganized Society for Electrical Development, established originally for just such a purpose, is available to function in this way. The entire staff and facilities of the Society have been placed at the disposal of the Joint Committees and this offer has been accepted. The Society brings to the support of this movement a force of men and women schooled in publicity and sales promotion work for contractor-dealers, central stations, jobbers and manufacturers, and ready for the job. Standing as it does in the center of the industry with the four classes of electrical men each working in its corner in its own field, this neutral workshop can carry on for all, free from the conflicting policies and politics that prevent any one class association from dominating all, or successfully assuming the authority to speak for all. For the electrical industry is bigger than any group, and to carry on this program through the years, the working force must have free hands to do its job.

The big work, of course, is the local organization and the local effort where each individual must play his part. And in community the electrical man who best has the capacity and the position for leadership must step out and call together a small group representing all classes of local electrical business to discuss the possibilities of a local activity. The central station executive, if not the initiator of this local movement must at least be actively one of this first group, for on his company, its sincerity and its effective co-operation depends in large part the success of any local work.

Your Part in It?

ASK yourself what you are in the electrical industry, where you belong and what your function is, there in the electrical family in your own town. How can your work contribute to business development for all? How can you benefit by the increased prosperity of all? Think through that far and no man need wonder what he should do. The opportunity is not a spectacular pot of gold, but rather a great market, your great well-known market, newly influenced by the new hope and confidence that good times indeed are here and we can go ahead.

Thus, it means just selling wiring and more wiring, selling lighting and more lighting, selling power and more power, and selling appliances and more applainces than you have ever sold before. And it will be possible to easily do all this because the entire industry will be at one time concentrated on this common timely purpose, all organized together in each community, backed by a power of supporting publicity that will make a wave of interest, and influence that will sell the goods and do the job.

Next a general meeting must be called of the entire local electrical family, and at this meeting the plan may be unfolded, and an executive committee embracing contractors, dealers, jobbers, manufacturers and utilities may be appointed to organize the community program. If there is already an electrical league in town, this is the body to build around. If not, then a new local association should be incorporated to eliminate personal and individual liability and give a common responsibility to the effort.

This committee, with this beginning will proceed to set up an organization of the necessary subcommittees to carry forward the work in co-operation with the national headquarters, and taking advantage of all the aid and counsel that may be obtained from the contributed experience throughout the country.

The Individual Responsibility

In this local program every influence should be marshalled that can possibly assist to express the purpose of the movement or advance its aims. The local chamber of commerce or board of trade can help, the press can help, the pulpit can help, the other utilities—street railway, telephone, water and gas can help; the carpenters, plumbers, painters, decorators, architects, lumber and hardware people and every one else who is interested in stimulating or guiding the building of homes can and will help, if you tie them into the broader plan. But, of course, the basis of the movement is the vitalized co-ordination of the electrical men in a practical workday selling plan to wire and equip more homes and business buildings, and to do this the comfort, the healthfulness, the cleanliness, the economy and the efficiency of "doing it electrically" must be pictured and sold to every man and woman in the town. The people must be inspired and persuaded to electrify—for better homes—for better business—for better times.

Publicity, movie films, speakers, and every other selling influence will be developed and organized for use, available to every town as it takes up the work. The full preliminary plans and the initial guide books will be made public at the big convention coming this month at Atlantic City. Here is the picture of the opportunity. Here is the way to make it yours. Will you tie in *today* and start to do your part to crystallize good times in your community through this great movement led and inspired by the electrical industry throughout the land?

"Use Imagination in Your Selling!"

Being a Personal Interview Reporting Comments

By **THOMAS A. EDISON**

A GREAT NEED of the selling side of the electrical industry today—or of any industry—is *Imagination!*—Imagination applied to Selling.

Realize that the public, the buyers, have little or no knowledge or even imagination about the uses of the new things, the new appliances, which are offered to them. It is the salesman who must supply that imagination. His own imagination must kindle the imagination of his prospects.

You can't sell simply with English alone—either spoken English or written English. You must *demonstrate!* You must show the public "how the thing works."

Let the woman buyer handle your goods herself. Leave your appliance with her at her home for a long-time demonstration. Let her try it out in her own way. *Never fear,* she'll like it—*and keep it.*

THAT very fact was proved in our own family not long ago when some people came out to sell us an electric refrigerator. They gave a demonstration of the machine and went away, leaving the refrigerator connected up and running. But the servants didn't like the new device and in a few days Mrs. Edison telephoned the company to come and take the refrigerator away. Somehow, however, her message was not delivered to the company's office. So for five months nobody came after the refrigerator and all that time it went faithfully on—making ice and keeping things cold.

Then one day a truck appeared and the driver announced that he had come after the electric ice-box. His mission was reported to Mrs. Edison. "Stop," she cried, "we don't want him to take that electric ice-box away. We want to keep it." And she sat down and wrote out a check for the very same electric ice-box which, a few months before, she had declared she would not give house room.

And so I say, leave your appliances in the prospect's home for a long-time demonstration. See that the prospect thoroughly understands how to operate the devices left with her. Then the electrical man must *keep away* from the house from one to three months—until the appliance has become a part of the household equipment. When you go back the customer will be ready to buy.

Demonstration is one way to use imagination in your selling.

EASY payments, I believe, offer the greatest help for getting electrical appliances sold. Do you know that most of the phonographs are bought on the installment plan, the payments in some cases extending two years?

If you had a $40 set of Shakespeare and tried to sell it outright, house to house, you wouldn't make many sales for the full amount in cash, would you? But try offering the same section of books at 25 to 50 cents a week and see the difference in results.

Each industry has its own best forms of selling—its methods which bring in sales. Use them, but apply also your imagination to the job Don't get impatient at results. You in the appliance field are making rapid progress in equipping homes with electrical appliances and devices. Keep it up.

Electrical men should certainly use electrical appliances in their own homes and daily life.

And electrical salesmen must *use Imagination in their daily selling.*

A scene in the office of General Squier, chief signal officer of the U. S. Army, while receiving music broadcasted over the electric-light wires from a distant transmitting station, with lamps and motors operating on the same wires undisturbed. The diagram shows the connections used. Note particularly that in this method of General Squier's the lighting-wires are *not used as aerials to detect space broadcasting,* but are serving as conductors for "wired wireless" or carrier currents directed over the wires from the broadcasting outfit.

"Broadcasting" by Wired-Wireless Over the Electric-Light Wires!

Advantages and Simplicity of "Wired Wireless" Shown in Experiments by U. S. Signal Service. Transmitting Station Uses Only 5 Watts. Aerials, "Static," and Interference All Eliminated. Every Socket and Outlet May Become a Gateway for Broadcasting

By O. H. CALDWELL
Editor, Electrical Merchandising

I HAVE just witnessed, first-hand, a most remarkable experiment—an experiment which to my mind may reverse the whole present set-up of radio and quickly bring a solution for the knotty problems of "broadcasting" and interference, besides throwing the entire broadcasting situation definitely back into the hands of the electrical industry.

In Washington, today, I have seen the Chief Signal Officer of the United States Army, General Squier, remove an ordinary lamp-bulb from its socket on his desk in the Munitions Building, screw in its place an ordinary attachment-plug connected to a receiving set, and immediately the loud-speaker rang forth with the notes of bugle-calls played by an Army bugler, coming over the electric-light wires from the distant station where the high-frequency "carrier waves" were being fed into the lighting circuit. Later, the bugle calls were followed by some phonograph records,—all reproduced as clearly and distinctly as if the original sources of sound were right in the room.

Lamps and Familiar Appliances Operate Undisturbed from Circuits Broadcasted Over

These bugle calls and selections *came over the electric light wires* by the process of "wired wireless," or high-frequency carrier currents, first developed by General Squier some years ago and now applied to broadcasting.

There was no antenna or aerial.

The receiving set was connected between the lighting wires and a "ground" on the office radiator. The lighting circuit tapped was the ordinary 110-volt, direct-current lighting system which supplies the whole vast Munitions Building and other nearby War and Navy Structures.

While the receiving set was thus operating, delivering its consistent clear music, the other two ordinary 25-watt lamp bulbs which General Squier had left burning in the portable lamp continued glowing undisturbed. Nearby, also, an electric fan, supplied from the same circuit, was buzzing merrily.

Lamps, fan and loud-speaker receiving set, all fed from the same power lines, thus demonstrated at a glance that *our familiar power and light wires can carry simultaneously both (1) energy currents and (2) broadcasting currents*, each interfering in no way with the operation of the other.

In fact, our lighting and power networks are admirably designed for just such broadcasting duty, and General Squier's experiment suggests that they may be eventually utilized to carry entertainment programs and educational and news features *into every wired home*, in addition to supplying energy for heat, light, and power, as they are now doing. Moreover, any reader familiar with recent radio developments, knows that if one frequency or wave-length of carrier current can be imposed on the light and power wires, it will be a simple matter to add other frequencies just as in radio, so that we might have a set of four or five different programs simultaneously on the wire, any one of which the listener could "tune in" at will. For example, position *A* on the tuning dial might be for grand opera; position *B* musical comedy; position *C* an educational lecture; position *D* children's stories and store advertising; and position *E* news, weather reports and clock time.

It is thus easily conceivable that in any wired home on a central-station line equipped with "broadcasting-by-wire" service, it would be possible to screw a single multiple plug into any convenience outlet and operate from that multiple plug simultaneously one or more lamps, an electric iron, a vacuum cleaner and *several different receiving sets*, one perhaps rendering Wagner, another the latest sprightly song from "The Blue Kitten," and a third reproducing Mr. Bryan's lecture comments on evolution.

Possibility of Simultaneous Programs, with Choice by "Tuning In"

Tuning is very much sharper and more accurate with "wired wireless" than with ordinary radio.

The troubles of "static" so prevalent in space wireless, are of course wholly eliminated with this "wired wireless," and outside interference of ordinary radio stations entirely disappears.

In the experimental set which I heard, General Squier was using a wave length of 550 meters. The sending outfit was a standard Army transmitting set connected to the lighting lines through a condenser (which holds back the lighting current while readily passing the high frequency 500,000-cycle carrier current on which the sound waves are conveyed).

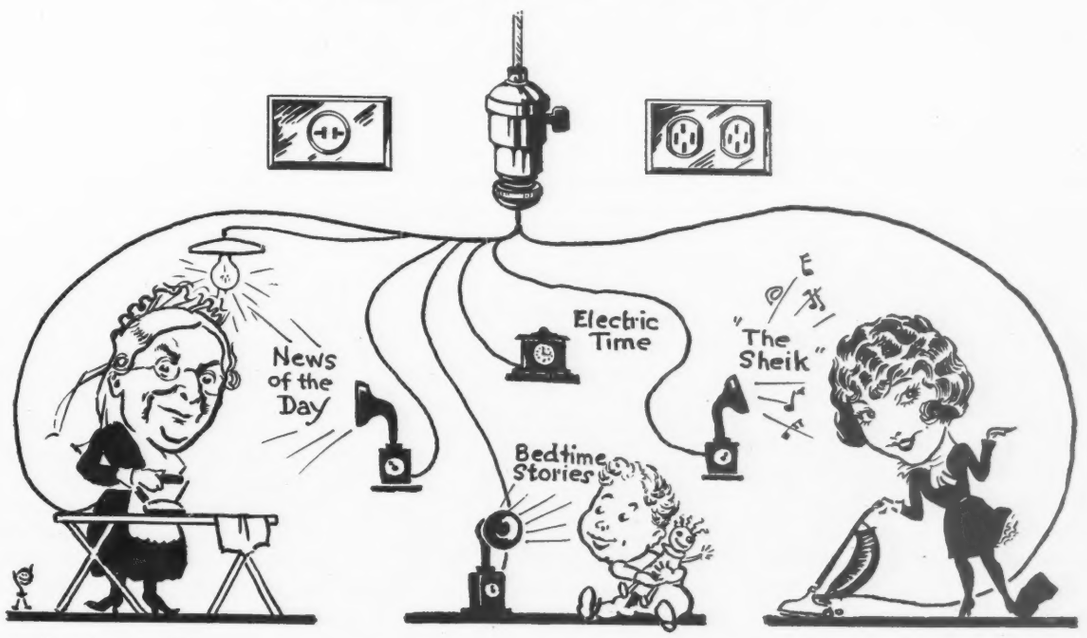
A Transmitting Station Using Only 5 Watts of Power

Especially noteworthy is the fact that General Squier was broadcasting over the local light wires using *only 5 watts of power* compared with the usual requirements of one to 100 kilowatts (1,000 to 100,000 watts) necessary with the ordinary radio broadcasting station transmitting through the ether. As the carrier currents are confined to the wires and have solid copper conductors all the way to the receiving instrument, very little energy is needed to broadcast into even a sizable network.

The receiving equipment as set up in General Squier's office was a Westinghouse R C set connected to the lighting circuit through an adjustable air condenser.

A number of different receiving arrangements have been experimented with—for example, bridging

Every Socket and Every Outlet May Soon Be—Not Only a Source of Light, Heat, Power and Electric Time, But—the Home's Gateway for Broadcasted Entertainment and Instruction as Well!



This sketch is *not* intended as a humorous prediction of the distant future. Instead, it is an attempt to show graphically just what we may very shortly see come to pass, using "wired wireless" to make our old friends the socket and "convenience outlet," sources of "broadcasted-by-wire" entertainment programs and home instruction—as well as outlets of electrical energy. Right now it is possible to furnish *through one socket or one outlet, simultaneously, all* of the different services here pictured, or, of course to draw these services from any number of separate outlets on the same circuit, at the user's convenience.

the receiving set across 110 volts, tapping it to only one of the outers of the Edison three-wire system, and so on. The presence of the condenser, of course, holds back any flow of lighting current.

Experiments have also been made impressing this wired wireless on alternating-current lines, the results being practically the same as for direct current, since compared with the high-frequency "carrier current" waves (500,000 cycles at 550 meter wave-length) ordinary 60-cycle current manifests comparably the characteristics of direct current (zero frequency)!

Remarkable Flexibility in Passing Broadcasting Between Systems

The high-frequency carrier-current waves readily pass from primary to secondary circuits—either through the medium of small condensers (2 micro-farads being found ample) bridged around the transformers from primary to secondary, or through the condenser action of the transformer windings themselves. Condensers also serve to pass on the broadcasting waves from a direct-current to an alternating-current system, or between two systems of different frequencies.

Questions have been asked concerning the transmission of these high-frequency carrier currents through underground power cables. The answer is that experiments have already been made at Washington successfully transmitting through 2½ miles of power cable, the longest stretch available. For underground cable systems of particularly great inductance, the frequency of the carrier current could of course be reduced, carrier-current frequencies as low as 5,000 cycles having been successfully used.

Broadcasting Is the Great Thing the Public Demands

After all, the outstanding fact, demonstrated by the "radio rush" of the last few months, has been *not the attractiveness of radio alone*, but *the discovery of a popular demand for electrically broadcasted entertainment*, permitting Mr. and Mrs. John Smith to sit at home and enjoy programs transmitted from distant centers. A radio set will always have its charms of marvelous mystery, but after the romance of the new radio outfit has worn off is it not a fact that the owner wants real entertainment, given by competent talent, and transmitted with clearness and dependable volume?

Major-General George O. Squier, chief signal officer of the United States Army, the inventor of "wired wireless," and originator of the suggestion that broadcasting can be carried on over the electric-light wires without interfering with the ordinary uses of the wires for supplying light, heat and power.

It is *broadcasted entertainment* that the public wants. And if this can be delivered more dependably, clearly and economically *over wires*, there is little need for wireless, except to places where wire systems do not reach.

In our great electric light and power networks on the one hand and in our telephone systems on the other, we have, all ready to be put to work, admirable channels for broadcasting by wired wireless, without interfering with the original purposes of these systems. Whether the more delicate equipment of the telephone system can be economically adapted to broadcasting uses without hazard of interference to its individual-line talking properties, is still a question, but there is evidence that the telephone people are thoroughly investigating the possibility of broadcasting by wire to every home over their present lines.

The lighting system, however, is ideally adapted for broadcasting—with its branching arteries and circuits, all spreading out from a central bus. *Designed indeed to broadcast electrical energy for light, heat and power*, its lines can easily take on the minute additional energy-load of broadcasting entertainment and information—involving currents barely measurable in milliamperes.

Where radio through space is troubled with "static" and interference, broadcasting by wire gives clear undisturbed transmission. Where 25 kw. to 100 kw. is required to broadcast through the ether, 5 or 10 watts suffices for broadcasting by wire. Where space radio is capricious, undependable and even given to "fading away" despite care to maintain all conditions constant, wired broadcasting is absolute and unvarying at any season, hour or minute. Where space radio requires an elaborate antenna, the wired-wireless receiver can be plugged into any convenience outlet or socket. Where the receiver for space radio must be *tremendously sensitive* to detect the most minute impulses, wired wireless-receiving sets will undoubtedly be brought to the uttermost simplification since there is ample energy in the waves received.

Of course much still remains to be done in refining and extending the pioneer work done by General Squier and his associates.

But from the foregoing it must be clear that the central stations and electrical industry generally have in "wired wireless" a tremendous opportunity if they will but have the vision to grasp it and put it to work. At little cost they can project throughout their communities entertainment programs, utilizing their plant investment to a vast new purpose, tapping the great entertainment field—which has heretofore richly rewarded the talking machine people, the movie and theater interests, and latterly the radio folk. Compensation for the central station can come in the form of a monthly service charge or even merely customer goodwill.

The "convenience outlet" and the socket—already the magic portals of *light, heat, power and even time-by-wire*—are shortly to come before us in new roles as gateways to *entertainment and education*.

Can any home then afford to be without electric service?

Electric-Light Wires as Aerials for Receiving Space Radio

NOTE particularly that the method of General Squier described on these pages does not use the electric-light wires as antennae for receiving space radio, although his experiments were incorrectly so interpreted in the first telegraph reports sent out.

It is, however, possible to use the electric-light wires as antennae for space radio in certain cases, and on page 99 there is given in detail the method for connecting a radio set to any socket or outlet instead of an aerial, to receive space radio-broadcasting as now being carried on.

The "Home Electric" at Boulder, Colo., is the new house of F. S. Henderson, local manager for the Western Light and Power Company who loaned it to the Boulder electrical industry for ten days' exhibition use, before moving into it himself. This night photograph shows how the house was floodlighted to attract wide spread attention locally. The Boulder Women's Club helped in displaying the "Home Electric."

Making the "Home Electric Week" a Social Event

At Boulder, Col., Power Company's Manager Loaned Use of His Completely Wired New House. In Ten Days Home Was Inspected by 18 Per Cent of City's Population

WHEN a demonstration Electric Home is opened and the public is invited to visit it, the social and personal possibilities in the event can be cleverly capitalized. Methods recently followed at Boulder, Colo., when the new completely electrically equipped home of F. S. Henderson, local manager of the Western Light & Power Company was opened to the public for ten days, were based largely upon the social and personal aspects of the affair.

And the Boulder Home Electric went over big, far beyond expectations. In the 10 days, 2,629 visitors went through the house—actually 18 per cent of the total population of Boulder.

At bottom, of course, the opening of the new Home Electric to the public was a commercial enterprise, as is the opening of similar homes in other communities. However, the Boulder dealers cooperating in the work, and Mr. Henderson himself, realized that the social and personal sides had such advertising possibilities that they should be considered first. To begin with, Mr. and Mrs. Henderson have an extensive personal acquaintance among the Boulder people. The opening of their private home to the public-at-large was therefore a very personal sort of an act. An electrical dealer's store is a store, and nothing can make it anything else. But a home—built in this case especially for Mr. and Mrs. Henderson and to be occupied by them—is a *home*, and that also you can't make anything else.

Prominent Boulder Women Assisted as Hostesses

It was decided to keep out of the enterprise any aggressive attempts whatever to sell—to make it, so far as possible, simply Mr. and Mrs. Henderson showing their new home to the people of Boulder. The demonstration of appliances within the home, it was decided, should not be delegated to salesmen or saleswomen, or even professional demonstrators. That would commercialize the atmosphere. So Mrs. Henderson undertook personally to demonstrate. To assist her, the services of a well-known member of the Boulder Women's Club, Mrs. Whangelin, were obtained.

In advance of the week, a representative of the local electrical dealers approached the Boulder Women's Club, the leading woman's organization in the city. The club, with due tact, was asked to provide hostesses for the week—one for each afternoon, two for each evening.

It is said that one lady remarked, "Why, it's only a selling scheme. I don't think we should have anything to do with it!" But this lady (who happened to have a family connection with another local public service

company which commonly is considered in competition with electricity), was in a sad minority. The Boulder Women's Club generally thought the Electric Home week was a splendid idea, of high educational value, and of public importance. It promised its support.

Some of Boulder's socially most prominent women were hostesses at the Home Electric. The two women on the Boulder city council, Mrs. T. A. McHarg and Mrs. Scott Campbell, both served.

Let any group of electrical dealers anywhere get such public support behind a Home Electric week, and the success of that week is practically assured. The Boulder dealers developed the social and personal possibilities further.

It was well understood that the oftener Mr. F. S. Henderson's name was mentioned in connection with the enterprise, the better it would be. The use of his name, as the owner of the home, made it personal. So, three thousand invitations were mailed. These read, "A personal invitation is extended to you to visit Boulder's First Home Electric, 931 Lincoln Place. March 3rd to 10th, 1922, 2 p.m. to 9 p.m. F. S. Henderson."

No advertising whatever was sent out with this invitation. Mr. Henderson's business connection was not mentioned.

Advertisements in the local newspapers did not even carry the names of the cooperating dealers. A large ad. three columns wide and upwards of half a page deep, read:

Have You Seen Boulder's First Home Electric?

931 Lincoln Place.

If not, arrangements have been made for an OPEN HOUSE Sunday Afternoon, from 2:00 to 6:30.

"You are cordially invited to inspect this modern home."

Advertisements of the event on the company bills specifically said, "Nothing to sell. Everything to see." Stickers on bills of cooperating dealers read, "Visit Boulder's First Home Electric. 931 Lincoln Place. March 3 to 10, 1922." Dealers used 5,000 of these.

At the home no names were taken. Hostesses were simply asked to count visitors. The only advertising distributed was a booklet, "The Modern Home." There was so little aggressiveness—by intent—about the Boulder dealers' advertising that the total expense was only about $300. Word of mouth, personal invitations, the support of the women's club, the social side of the affair, put the enterprise over. The biggest days were after visitors had had opportunity to tell their friends about the home.

It was because of the increasing attendance, and the apparent fact that many more, given the opportunity, would visit the home, that the originally planned week was extended to ten days. On the first day there were 175 visitors, on the last, 550.

A Duo-Art piano helped much to give a festive air to the gatherings at the home. Its social possibilities were too good to neglect. One Saturday afternoon an hour's concert was held by the Boulder Music Society at the home. The event drew about 75 people.

All these things made it easy for the local newspapers to consider the Electric Home as genuine "news." Columns were printed about it. Mr. Henderson was present every evening at the home.

It was said earlier in this that the Boulder dealers decided to keep aggressive selling out of the demonstrations. As for salesmanship, however, putting a Home Electric week on a social basis really permits a very high type of it. As an instance of this, consider one of the biggest things electrical dealers have to sell the public on—the desirability of numerous convenience outlets. Get people to wire their houses adequately, and the appliances are bound to come. Without seeming to be selling, it is practical at a Home Electric demonstration to do a great deal to convince visitors of the importance of convenience outlets. Mrs. Henderson and Mrs. Whangelin, at the suggestion of Mr. Henderson, continually talked the importance of convenience outlets throughout the ten days—told hundreds. With the many appliances of comfort and convenience the outlets permitted in actual demonstration, it was easy to persuade visitors of their value. As a result one Boulder woman gave positive instructions for her new house, "I want the convenience outlets to be installed just as Mrs. Henderson's are."

The Boulder dealers were not looking especially for immediate results,

Some interior views of the "Home Electric" exhibited at Boulder, Colo., in March. A social atmosphere was thrown about the event by getting the mistress of the home to receive the visitors in person, with the assistance of members of the local women's clubs. The attendance increased day by day, as the earlier visitors sent back their friends to see the house of electric wonders. The arrows call attention to the electrically operated devices. Note, particularly, the electrically heated blanket in the bedroom.

but they began to occur right away. Mrs. Henderson and Mrs. Whangelin demonstrated in an atmosphere of social friendliness. They were not saleswomen, in the ordinary sense. Nevertheless, there is no atmosphere like the social, friendly one for facilitating persuasion, and demonstrations were undoubtedly many times more effective than they would have been under typical store conditions.

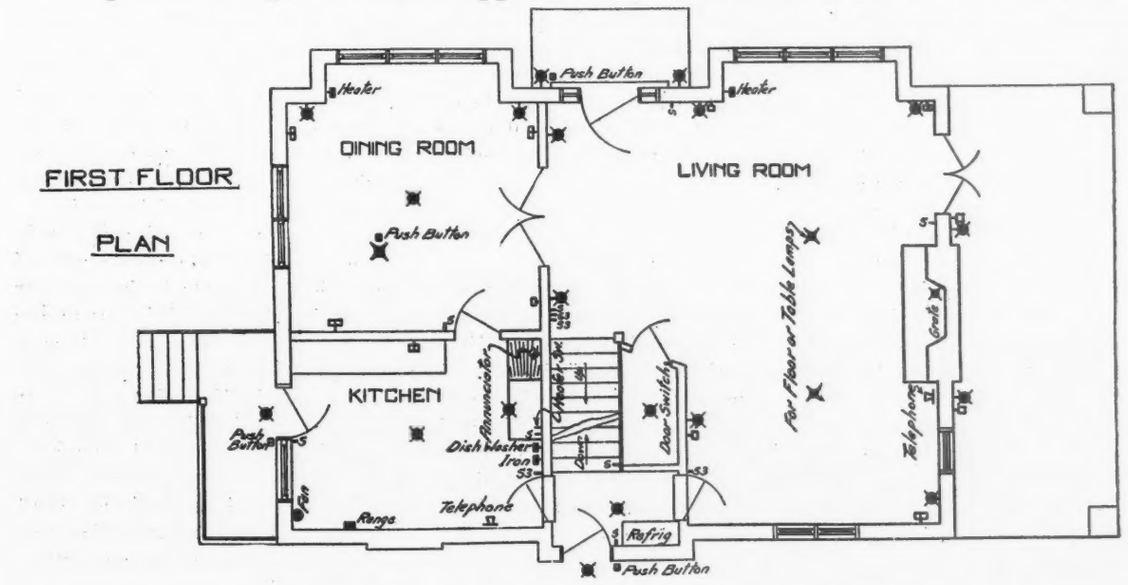
Capitalizing the social possibilities in the opening of an electric home to the public is one of the dealer's best bets.

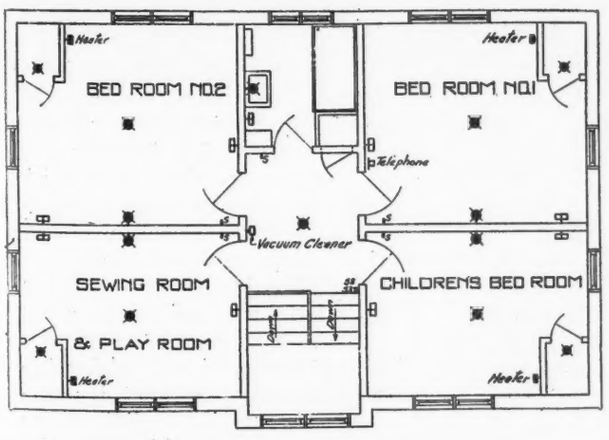
Boulder's "First Home Electric" cost approximately $5,500 to build. The extra wiring over that found in the average five-room bungalow, Mr. Henderson states, cost perhaps $100. The electrical equipment on exhibition totaled around $5,000, the principal item in this being the electric piano. It was all new, and all loaned, with the few exceptions of goods consigned by local dealers participating in the affair. The dealers had no difficulty in getting the cooperation of a local furniture firm and a florist, in return for the advertising derived.

The equipment installed in the home included a cigar lighter, electric fire-logs, fountain, candle sticks, lamps, player piano, combination sewing machine-sewing table, tea samovar, coffee urn, breakfast table equipped with outlets, percolator, egg boiler, toaster, waffle iron, electric range, fireless cooker, kitchen unit, dishwasher, pressure cooker, egg beater and mixer, refrigerator, milk heater, hair curler, marcel waver, dryer, vibrator, thermo-net blanket, electric victrola, vacuum cleaner, radiators, violet-ray machine, floor polisher, washer, extractor and dryer, ironer, hand ironer, wringer, battery charger, tire inflator, trouble lamp, etc.

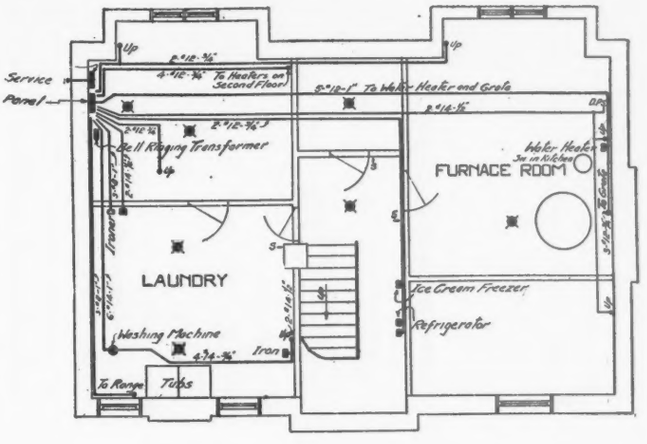
The cost to the local dealers for the enterprise was about $500.

Adequate Wiring, as Well as Appliances, Featured in Toronto's First Electric Home





—SECOND FLOOR PLAN—



—BASEMENT PLAN—

"Emphasize the wiring, not the appliances!"—such was the word that went out to all helpers in the first Toronto Electric Home. A wider knowledge of adequate wiring was regarded as the main object of the Home—appreciation of electrical appliances would follow of itself, it was thought. Besides the appliances exhibited in the Home would be sure to attract attention without being pointed out, whereas many features of the complete wiring installation would be overlooked if not emphasized in the demonstration talks.

At the plans show, no attempt was made to put in any "stunt" wiring, or anything beyond what the average home would need in the way of convenient switches, outlets, lights and other wiring conveniences. Note the light in each closet—a feature that won the particular approval of women visitors. In the living room, the demonstrator called attention to the additional convenience afforded by the wiring of dining table and tea wagon.

This home was the first of a series of four Electric Homes planned for this spring by the Toronto electrical interests at the suggestion of Kenneth McIntyre, Canadian representative of the Society for Electrical Development.

We Must Educate the Public to Demand

Complete Wiring Jobs

The "Outlet" as the Controlling Factor and Income-Producing Element of the Electrical Business. Evidence that Housewiring Is Passing into Hands of Casual or "Curbstoner" Contractors, Who, Selling on Price Only, Seek to Cut Down Installations and Number of Outlets

By T. E. BIBBINS
President Pacific States Electric Company, San Francisco, Cal.

STABILIZATION is as essential in the electrical industry as in any other business. The function of producing and transmitting energy has been developed to a high degree of efficiency, supported by the rapid development of engineering facilities. The manufacturing and engineering elements of the industry have progressed efficiently and rapidly and have established new records for American ingenuity and craftsmanship, but the distributing and selling functions have not been stabilized to meet either the growing demand for electrical service or the ability of the power companies to deliver current.

All of the technical requirements of service have been met by the manufacturers through the development of engineering skill. In the same manner, power companies have met the problem of producing and transmitting energy. But wholesalers and retailers have often disregarded the basic requirement of public interest and have devoted much of their time to the education of each other in an effort to evolve business formulas for the sale and distribution of electrical merchandise.

The "Outlet" Is the Industry's Chief Asset

Progress has demanded these activities and their importance cannot be overestimated, but now the time has come when, if the business is to grow so as to be of satisfaction and profit to the men engaged in it, and what is even more important, if it is to be of complete value to the public, the public must be included in all active plans of electrical development.

The greatest, if not the one and only asset of the electrical industry is the "outlet"—the power outlet in industrial plants, and the "convenience outlet" in the home. Installed behind, attached to, and flowing through the outlet, is the only source of income on the investment of more than two billion dollars in the electrical industry.

The problems of meeting the technical and mechanical requirements of service have absorbed the greater part of the effective thinking of the industry during the past twenty years. Until now there has been no practical anticipation of the need for stabilizing and refining the methods of distributing electrical merchandise and current consumption, based upon the simple hypothesis of *treating the outlet as the controlling factor and income-producing element of the business.*

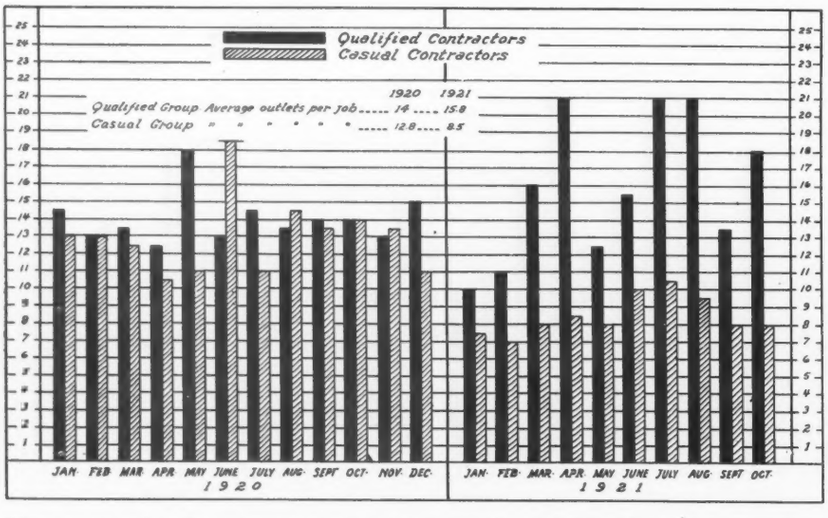

Qualified Contractors
Casual Contractors
1920 1921
Qualified Group Average outlets per job ..... 14 ..... 15.8
Casual Group " " " " " " ..... 12.8 ..... 8.5
JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.
1920
JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT.
1921

Diagram showing the average number of outlets installed per job by the two groups of contractors. Attention is directed to the fact that the great decrease in the 1921 performance of the casual group is not due to any great fluctuation in monthly averages, the variations being limited to between 7 and 10½ outlets per job. On the other hand the figures appear to clearly indicate that the 1921 difference between the two groups cannot properly be attributed to the qualified group securing a large proportion of the industrial and mercantile jobs, since the record for the casual group for 1920 shows an average performance of only a fraction more than one outlet difference to the qualified group. The conclusion must be obvious that under the economic pressure of "tight" conditions in 1921, the casual group decreased the number of outlets per job with the definite objective of reducing installation charges to the public regardless of service requirements of the house owner.

Contractor Dictates Outlets

The electrical contractor practically controls the number of outlets to be installed on each job in the present status of the electrical industry. It is his contact with the owner which determines the sum total of the potential aspects of the business—the number of outlets to be installed.

In building, buying or renting a house wired for electricity, a citizen is entitled to the complete service which a competent job of wiring implies. Yet today, at least seventy-five per cent of such buildings are equipped with "step-ladder" installations only. In other words, the occupant is compelled to stand on a chair or remove a lamp from its socket to get any approximation of complete service from the current delivered. It is even estimated that twenty-five per cent of the convenience appli-

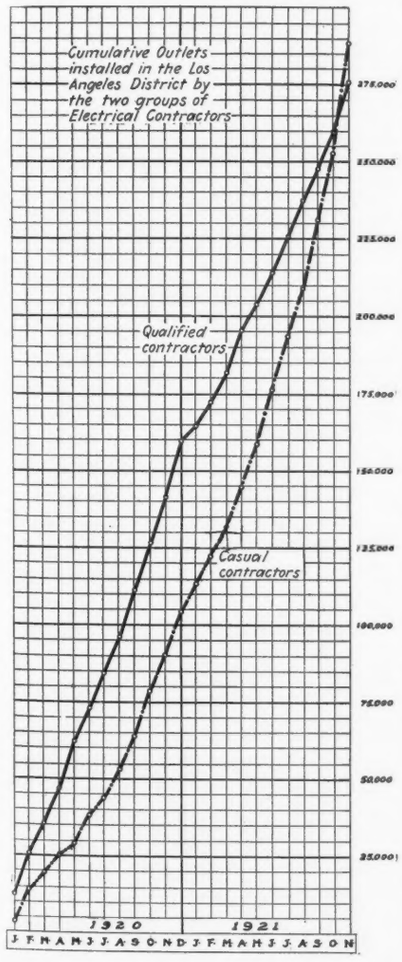
ances sold in Pacific Coast territory are not in use because of inadequate wiring.

Workmanship and Service, Versus Price

In the past the contractors of the Pacific Coast have been dividing themselves into two groups, one consisting of qualified contractors, who do business on the basis of good workmanship, standard materials and fair prices, and the other group composed of irresponsible, casual contractors, who deal entirely upon the basis of price.

During 1920, for instance, a survey of the Los Angeles territory shows that qualified contractors obtained approximately fifty-eight per cent of the total number of jobs, installed sixty per cent of the outlets and averaged 14 outlets per job. In the same year the casual group of contractors obtained forty-two per cent of the jobs, installed forty per cent of the outlets, and averaged 12.8 outlets per job.

But in 1921 the qualified contractors secured only twenty-seven per cent of the jobs, installed only thirty-nine per cent of the outlets, but averaged 15.8 outlets per job. The casual group obtained seventy-three per cent of the jobs, installed sixty-one per cent of the outlets, but only averaged 8.5 outlets per job.


Cumulative Outlets installed in the Los Angeles District by the two groups of Electrical Contractors
Qualified contractors
Casual contractors
1920
1921
J F M A M J J A S O N D J F M A M J J A S O N

In 1920 the qualified and casual groups of electrical contractors in the Los Angeles district together installed a total of 264,112 outlets. Of this number 159,364, or nearly 61 per cent were installed by the qualified group. The qualified group therefore entered 1921 with a lead of 54,616 outlets, but this margin was steadily decreased by the activity of the casual group, until, in October, 1921, the qualified lead by only 6934 outlets. In November the casual group installed 125 per cent more outlets than the qualified group, and then increased their lead, with a cumulative total of 288,882 outlets as against 275,999.

Lowest Bidder Gets the Job, Regardless of Value

The obvious deduction from these figures is that the irresponsible contractor is definitely reducing the potential market for all electrical products and service, by failing to take advantage of the natural demand. What is even more important, he is imposing unsatisfactory service upon the public.

The lack of knowledge of the average person concerning the wiring contracting business, except in the terms of cost, is the great difficulty in this case. The lowest bidder gets the job, because the public believes that if there is a difference of $50 in the cost of installation that difference goes into the pocket of the contractor as profit. This method of doing business is contrary to the buying habits of the American public. All successful merchants in other lines deal upon the basis of quality, not price. Therefore, since the consuming public does not know the facts, and the qualified contractor has not demonstrated his ability to get his story over to the public, it becomes necessary for manufacturers and distributors to take steps to educate the public.

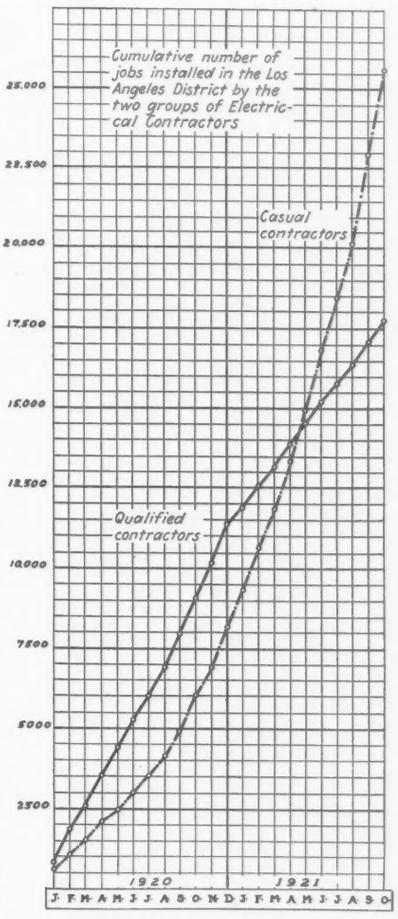
Losses Measured in Millions

It is conservatively estimated that the difference between an adequate number of outlets and the actual number installed on the Pacific Coast in 1921, counted in terms of contractors' cost of material and labor, is three and a quarter million dollars. This estimate does not include the increment of income which would accrue to the power companies for an indefinite period of time.

The social and economic life of the community is being seriously affected by the incompetence of the present methods, and if the electrical industry is to become stabilized and properly rounded out, it will be necessary for all of the producing and distributing factors of the industry to develop ways and means of meeting the public problem of complete installation service.

From my point of view, this means that more effort and cost must be applied to public education. The qualified contractors of every community are worthy of public confidence, and entitled to the consideration that comes with the understanding of the difference between quality service and contracts let upon price only.

The buying habits of the public are normally exercised in favor of this condition, and I firmly believe that as soon as the public realizes that a bid for electrical work based upon good workmanship, standard materials and


Cumulative number of jobs installed in the Los Angeles District by the two groups of Electrical Contractors
Casual contractors
Qualified contractors
1920
1921
J F M A M J J A S O N D J F M A M J J A S O

The conditions as developed in relation to the outlets installed by the two groups of contractors show a still greater variation when interpreted in terms of jobs installed. In 1920 the two groups together installed a total of 19,553 jobs in the Los Angeles district. Of these, 11,350 or 58 per cent were installed by the qualified group. The qualified group therefore entered 1921 with a cumulative lead of 3165 jobs. Five months later, however, the casual group had not only eliminated this lead but had forged on ahead with a cumulative total of 14,962 jobs against 14,514, and on November first the casuals led by 7,870 jobs.

fair prices is the only kind of a bid worth considering, that status of the contractor will become established and complete installations will become the rule, not the exception as today.

A Difference of Only ½ of One Per Cent of Value of Building

The difference between a competent installation made by a qualified contractor and the cut-price kind is only about one-half of one per cent of the value of the building—$50 on a $10,000 house. When the owners are brought to understand that this difference in cost carries completeness and permanent satisfaction in the use of electricity, and is not merely an additional profit to the contractor, confidence will be established and the business will take a normal course toward proper development.

Such public education, I believe, can be accomplished only through broadcast newspaper advertising, and no single company or organization can hope to completely accomplish the results single-handed.

The Pacific States Electric Company, beginning March 1, 1922, is undertaking such a campaign, covering the daily newspapers of the principal cities of its entire territory, reaching over 700,000 people twice a week for the balance of this year. The object of this campaign is to establish a relationship of confidence between qualified contractors and the public, believing that the entire industry, including contractors, manufacturers and distributors and retailers of standard material and appliances, and the power companies will benefit from this effort. Furthermore, it is expected to meet the crisis which has come in the wholesale end of the electrical business, whereby unless the channels of distribution are opened for a free flow of electrical merchandise, the distributor, as well as the retailer and contractor as we know them today, will not continue to do business.

The Cost of the Lowest Bid
NOWHERE does false economy exact such heavy penalties from the inexperienced as it does in the employment of electrical contracting service.
The difference in the bid of the qualified, responsible electrical contractor and the irresponsible is usually only about one-half of one per cent ($50.00 on a $10,000.00 house.)
And the householder who thinks that $50.00 worth saving will eventually spend five times as much in repairing faulty materials and workmanship or installing additional outlets whose omission made the lower bid possible.
The use of materials of quality and high standards will in a large measure determine the reliability and integrity of the electrical contractor.
Look for the "check" seal on electrical appliances and materials. This standard electrical merchandise, chosen from the markets of the world, inspected and certified, is distributed through qualified contractors and dealers.
The Pacific States Electric seal is, therefore, a guide not only to reliable electrical appliances and installation materials, but also helps to identify the competent contractor.
You will enjoy our new booklet "The Electrical 'How' for Householders," which describes how some of these materials and appliances are used in the course of a typical day in an electrified home. It may be obtained free from any contractor or dealer displaying this seal.
T. M. REG.
Look for this Seal
PACIFIC STATES ELECTRIC COMPANY
SAN FRANCISCO LOS ANGELES OAKLAND PORTLAND SEATTLE

An example of the newspaper advertising which Mr. Bibbins' company is now running in the principal coast cities where the jobbing company has local contractor-dealer customers. These ads are all aimed to teach the public to demand good work and complete electrical installations, and to be willing to pay fair prices for it.

Sub-Standard Materials and Incomplete Jobs Are Leading to Economic Chaos

Sub-standard materials, cut-price installations, based on less than fifty per cent of a complete job, are leading to economic chaos in the electrical business. The standards cannot be raised without public consent, and the public will not give its consent until it knows the facts. A sufficient number of people must be told the facts often enough to have a specific effect. It is to be hoped that all manufacturers, wholesalers and power companies will adopt similar methods, and that every effort will be made to assist contractors in a sound development of that end of the business, because upon it depends the progress of the entire industry.

No industry could be considered as developing soundly so long as one of the most important factors in it has not been able to accumulate a surplus as a basis of credit, therefore the other factors who are now looking to the contractors to open channels of sales are depending upon an unstable condition.

It is necessary to increase the volume of contracting business per job to a point where it competently serves the public, and produces a fair profit to the contractor before the electrical business can be considered as becoming stabilized and sound for everybody engaged in it.

Contractors themselves are not financially in a position to educate the public, but the manufacturer, distributor or power company operate over a larger territory and their effort should have more effect in establishing public confidence in the contractor than his own advertising.

We believe that contractors generally will keep faith with the public, and will meet public confidence with good workmanship, standard materials and fair prices. Unless this is so, the outlook is very discouraging and the electrical business will not proceed in a manner proportional to the inherent and potential existing opportunity.

"Home Electric" Ideas from Everywhere

Reports from all sections of the American continent show how model "Home Electric" displays are attracting crowds wherever thrown open to the public

Provo's Home Electric Features "Wired Furniture"

All the newest developments in electrical comforts and conveniences for the home—even to wired furniture—were exhibited to the residents of Provo, Utah, in the Home Electric which was opened to the public in that city from March 1 to March 5. The wired dining table and wired tea wagon, each providing additional and convenient outlets for the housewife and hostess, won particular attention.

Another novel feature which interested visitors was the installation of burglar lights on the four corners of the house, operated by switches from either the front porch or from the owner's bedroom.

The house had been built for a Provo resident who consented to let the electrical men of the town use it for a week, for display purposes as a "Home Electric."

Montreal Has Second Home Electric

Montreal, Canada, had its second Home Electric when a completely wired and electrically equipped house was opened to the public at Cote des Neiges on February 22. The Home remained open until March 18, with an average daily attendance of 350. The arrangements were made under the auspices of the Electrical Co-operative Association of the Province of Quebec.

Newspaper Putting on Home Electric Campaign

To demonstrate how a comfortable and artistic home may be built and financed by the average family under present conditions, the *Minneapolis Journal*, Minneapolis, Minn., is building a six-room model house in the northeast section of the city, to be placed shortly on exhibition.

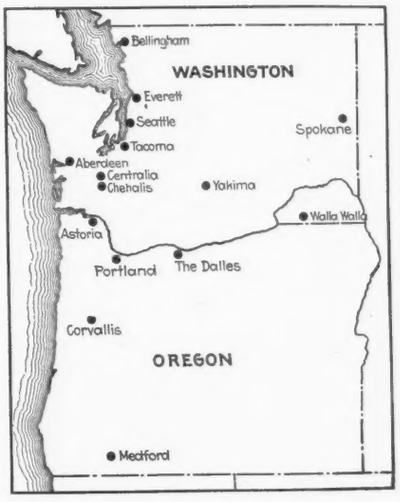
Incidentally, the house will be a complete Home Electric modeled on those built in Los Angeles and other cities. There will be some fifty convenience outlets, and the house will be equipped with electrical dishwasher, clothes washer, fire logs, ironing machine, vacuum cleaner, and other modern conveniences.

This will be the first Home Electric in Minneapolis. The identity of the firms to which contracts are awarded will not be disclosed.

Small City Can Put Over Home Electric, Too

More than 3,500 visitors, or 12 per cent of the city's population, were recorded at the Home Electric recently opened to the public in Fort Smith, Ark., under the auspices of local electrical and real estate interests. The advertising value of the exhibit was shown by the fact that all the draperies, the dining room furniture and living room furniture in the Home were sold, and the house itself was sold the following week.

Home Electric Campaigns in Washington and Oregon



This map of the northern Pacific Coast states shows the cities and towns in which "Home Electric" exhibits have already been held or will be held in the near future.

Registration of Visitors Supplied Useful Appliance Data

At Cleveland, 3,400 people visited the first home, which was open thirty-two days or from May 15 to June 15. A like number visited the second home, open twenty-nine days or from Sept. 11 to Oct. 9. The third home was open from Oct. 16 to Nov. 13, also twenty-nine days, and was visited by more than 13,000 people. The daily attendance at all three homes was as follows:

DAILY ATTENDANCE AT CLEVELAND ELECTRICAL HOMES

Number of Day	Day	First Home	Second Home	Third Home
1	Sunday	3,004	2,755	1,648
2	Monday	752	1,387	502
3	Tuesday	786	1,390	451
4	Wednesday	749	1,365	360
5	Thursday	1,139	1,246	253
6	Friday	860	1,258	376
7	Saturday	509	687	381
8	Sunday	1,805	2,666	1,693
9	Monday	520	942	437
10	Tuesday	698	926	475
11	Wednesday	704	825	422
12	Thursday	698	1,190	315
13	Friday	482	1,160	380
14	Saturday	275	678	555
15	Sunday	2,179	2,621	1,537
16	Monday	1,276	798	251
17	Tuesday	414	1,045	15
18	Wednesday	620	1,054	321
19	Thursday	770	1,126	225
20	Friday	591	660	264
21	Saturday	649	848	190
22	Sunday	2,902	2,116	726
23	Monday	728	543	249
24	Tuesday	868	468	359
25	Wednesday	814	932	78
26	Thursday	903	1,247	346
27	Friday	703	186	341
28	Saturday	492	390	245
29	Sunday	3,300	2,281	570
30	Monday	1,215	....	....
31	Tuesday	1,656	....	....
32	Wednesday	1,442	....	....
Total		34,354	34,790	13,965
Average per day		1,073	1,199	481
Total for three homes				83,109

How Prospect Data Was Obtained

Each guest was invited to fill out a registration card. This card gave full information as to address, size of house, wired or unwired, who owned it, number of outlets and list of appliances in use. In this second house 29,256 people out of the 34,790 guests made out a card, and in all well over 85 per cent of the total attendance of 83,109 at three houses handed in this valuable information. Each visitor was also presented with a booklet describing and picturing the house and giving full data as

to the wiring and the appliances shown.

The following information was secured from cards filled out by visitors at the second electrical home. After throwing out duplicates and cards that lacked information, these data were taken from 13,550 cards representing the same number of different addresses and families:

Number who own home in which they live	6,775 or 50 per cent
Number who plan to build home	4,485 or 33 per cent
Average number of convenience outlets per home	3½

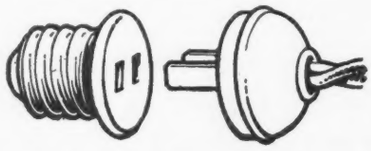
And the following appliances are owned:

Ranges	367 or 2.7 per cent
Dish washers	180 or 1.3 per cent
Electric refrigerators	129 or 0.9 per cent
Clothes washers	4,908 or 36 per cent
Sewing machines	2,120 or 15 per cent
Vacuum cleaners	9,703 or 71 per cent

Information on ironing machines, because of incorrectness, was not tabulated. At the three homes visitors came from 640 other cities in Ohio and from 146 cities in twenty-five other states and foreign countries. Pennsylvania gave the largest attendance—105—from outside the state, but there were six registrations from California, seven from Florida, one from both Argentine and New Zealand, and of the homefolk, they came from 1,243 streets.

Then there were the booklets, one for each home; there were special announcements and invitations, and special letters sent to architects, builders, contractors, real estate men, women's clubs and so on. Also one hundred arrows were printed on ⅞-in. board, 3 ft. long and 8 in. wide—white signs with red letters reading "To the Modern Electric Home"—posted on poles and trees along all streets leading to the house, and these, with the floodlights that illuminated the house itself, produced as much publicity as all the rest combined.

Equip All Appliances with the Standard Plug



The standard plug with parallel blades is the plug now in general use, having two blades set parallel to each other at a distance of one-half inch between centers, and the blades themselves measuring ¼ in. wide across their faces.

These plugs are interchangeable as made by thirteen different competing manufacturers, and are now furnished with some 200 lines of appliances.

Radio Programs to Draw Crowds to Nashville's Home Electric

Radio programs every evening, and extensive newspaper and electric sign advertising, are expected to play a big part in attracting visitors to the Home Electric which will be opened this June in Nashville, Tenn.

The house is a new one, just built, and will be completely electrically equipped, even to electric fireplace logs, an electric phonograph, and an electric "Duo-Art" piano.

Buffalo to Have Home Electric

Buffalo's mayor has already endorsed and pledged his support to the "Modern Home Electric" which the Lighting Fixture Dealers' Society of Buffalo recently anounced was going to be built under its auspices and put on exhibition. The house is being built on Montagu Avenue and when opened to the public will be completely equipped with electrical necessities and conveniences.

To Give the Home that "Lived-In" Look

At Lakewood, Ohio, two women demonstrators actually "made their homes" at the Electrical Homes on exhibition during the periods the homes were open, which explains probably why, instead of the air of a show place, the homes had that "lived-in" atmosphere that appealed to many of the visitors.

Concerts and Demonstrations "By Wire" and Wireless

In the sewing and play room of the Toronto, Ont., house was installed a wireless telephone apparatus, which actually gave the demonstration talk given in the other rooms by guides. Here all the demonstrator had to do was to point out the various electrical devices in the room as their uses were explained by the instrument. Concerts by wire were also given in this room at stated intervals.

"I'd Walk a Mile to See a Home Electric!"—and Many of These Cantonians Did, Too

If Canton's Electrical League succeeded in inducing some 14,000 Cantonians to trek cheerfully to the outskirts of the city for the sole purpose of viewing its Home Electric, you may depend on it that the League did a strenuous bit of campaigning first. It didn't let the Home gradually win its way by sheer force of excellence. It stood up and hollered about the Home. It blazed the tale on billboards by day and night—it lighted the streets leading to the Home—it floodlighted the house itself—and used up several miles of good white newspaper space. The results are suggested in the picture above. People walked, rode and drove out to see the home, who had never heard of that newly-built section of Canton before. And the house was often so packed that, occasionally during rush hours, the registration system broke down and the door keepers could not count all the visitors.

Electrical Merchandising *Pictorial*

A Monthly Picture Section of Sales Ideas

Follow Up the Moving Men!

WHEN the big five-ton truck with the moving-van body stops in front of a vacant house and the driver takes a sage look at the soft mud in the gutter before backing up to the curb—take a sage look, too! And when the van men begin producing family furniture from the cavernous depths of their portable warehouse, write down the house number and the new family's name. Get also the names and addresses of other families that have moved into your neighborhod this May, for these new comers are among your very best wiring and appliance prospects.

THEN next morning, pick up your best catalogues, or some pictures of well-wired interiors or a copy of ELECTRICAL MERCHANDISING, and stop your own car in the fresh tracks of that moving van. Push the door bell and introduce yourself and the service you have to offer in making the house electrically home-like. The pictures or your copy of MERCHANDISING will help tell your story. One of the first jobs is to make sure that the cleaning appliances—the vacuum cleaner and the washing machine—are ready for service. More convenience outlets, a center-floor outlet for the dining table, new cords and plugs for the table appliances and floor lamps, all fill the needs of the day-after-moving day.

* * *

May is the month to follow up the moving van! The electrical man first on the spot can handle the essential electrical needs of the moment and often open the way for a profitable string of further jobs and sales.

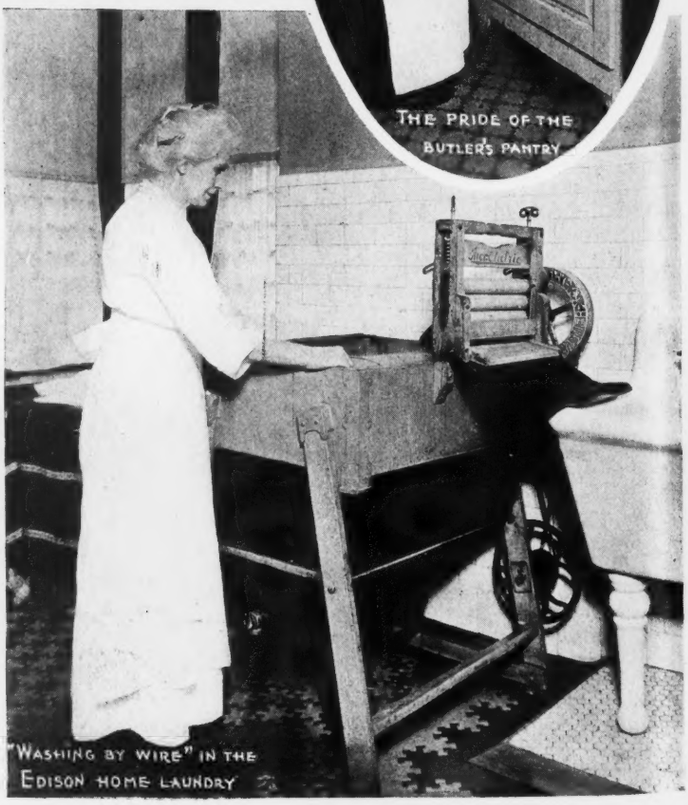
"The Wizard's" Own Home Electrical

MR. EDISON'S beautiful home at Orange, N. J., is of course, "a gentleman's big house" with its corps of servants who remove the ordinary housekeeping processes far from the family itself. But the great inventor's keen interest in having electricity used wherever it will serve to best purpose, is well shown on these pages which picture some of the electrical conveniences in the Edison home, from the electric refrigerator to the family runabouts—electric, of course!

BETWEEN ALL-NIGHT LABORATORY VIGILS—
MR. EDISON SNAPSHOTTED ON THE LAWN
OF HIS HOME IN LLEWELLYN PARK, ORANGE, N.J.

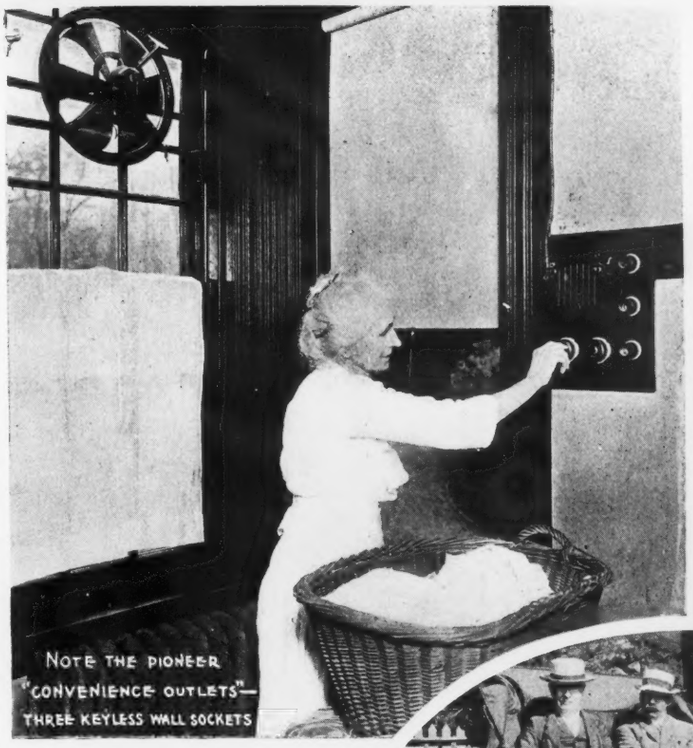
THE PRIDE OF THE
BUTLER'S PANTRY

THE CABINET CONTAINS THE MODEL
OF THE FIRST PHONOGRAPH



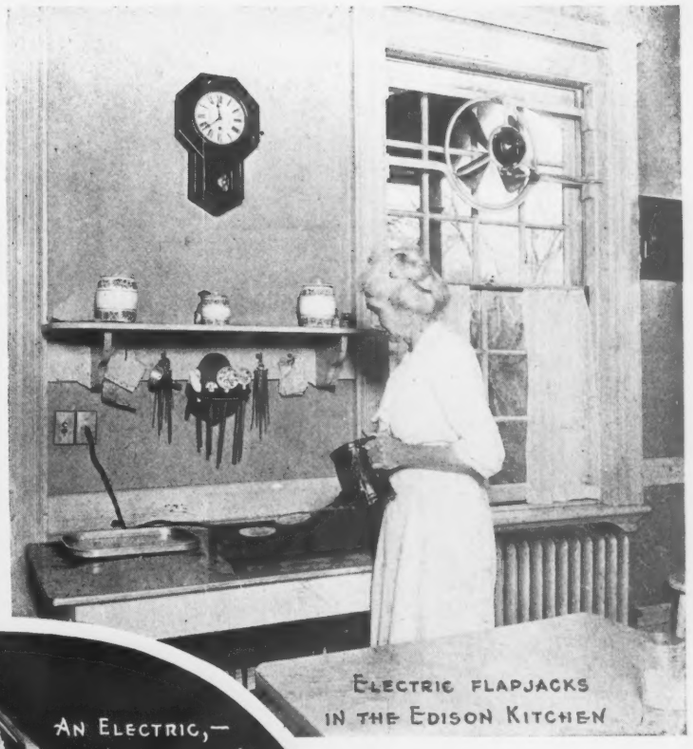
"WASHING BY WIRE" IN THE
EDISON HOME LAUNDRY

Electrical Merchandising Pictorial, May, 1922



NOTE THE PIONEER "CONVENIENCE OUTLETS"—THREE KEYLESS WALL SOCKETS

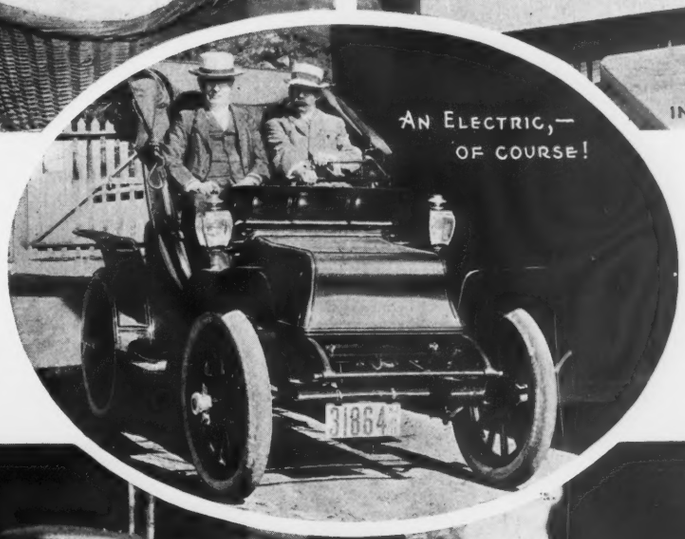
NO STALE air in the Edison laundry (shown above) with the well-placed electric ventilator on the job. And reflect a moment—Oh, Mr. 1922 Electrical Man—on these keyless wall sockets provided for operating appliances—probably among the very first "convenience outlets"!



ELECTRIC FLAPJACKS IN THE EDISON KITCHEN

ELECTRIC ventilation also prevails in the culinary department, where the good-natured Edison housekeeper let us take her picture at the electric grill browning appetizing flapjacks.

And, as you guessed, the Wizard rides in a noiseless, smokeless, dirtless electric car.



AN ELECTRIC,—OF COURSE!

THE "CONNING TOWER" OF THE EDISON INDUSTRIES AT ORANGE, N.J., WHICH EMPLOY 6,000 MEN. SEE THE BOSS'S ELECTRIC DICTATING MACHINE AND TELEPHONE-MESSAGE RECORDER

How to Crystallize Good Times in Your Town—A Go-Getter

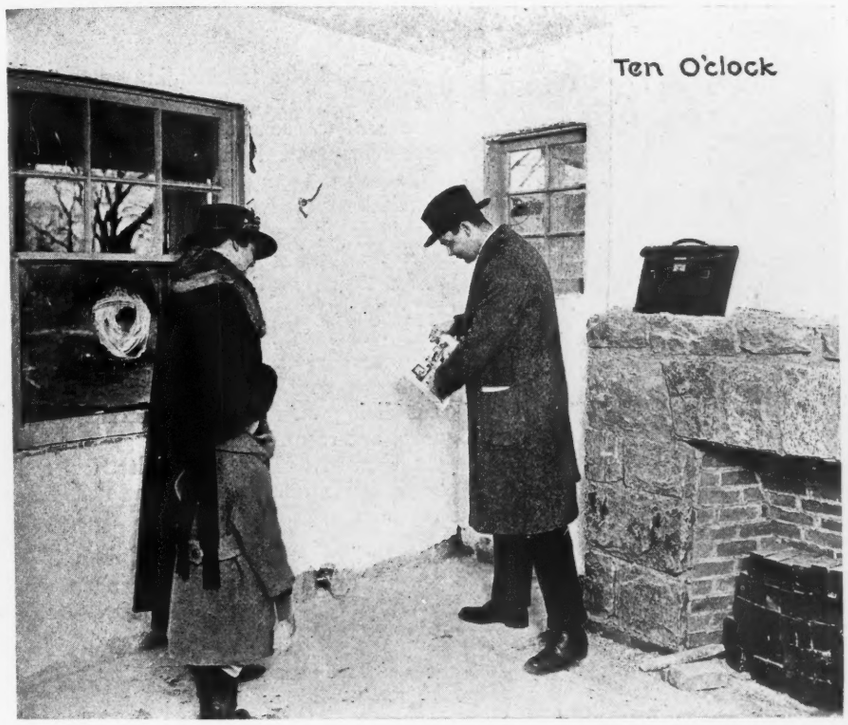
THE DAY'S WORK of the More-and-Better-Business salesman *begins the night before!* At 6 p. m., while the stenographer is hurrying through the last of the letters and the janitor plies the brush and broom in the outer office, your star salesman is checking his cards against his note book, and planning to make every hour of the next morning give him sixty business-getting minutes.

Eight a. m. finds him on the porch of the Chatfield residence just as Pete delivers the new washing machine. Helping Pete unpack it, the salesman makes sure that the machine is in perfect running order and that Mrs. Chatfield gets a good start on scrubless washing.

And while he is at the Chatfield's, his notebook reminds him to drop in on Mrs. Davis, three doors down the street. When Mrs. Davis was in the store last week she asked about electric cream whippers. The chance to use one herself in her own kitchen closes the sale and when Mrs. Davis mentions that her neighbor, Mrs. Bayliss, has tonsilitis and that Bill Bayliss is doing the housework—

So our salesman calls at the Bayliss back door and finds Mrs. Bayliss' husband presiding over the dish-pan. Here's a brother in distress! After selling Bill Bayliss an electric dishwasher, the salesman phones the office and arranges to have them send a machine right up.

Salesman Puts In a More-and-Better-Business Morning



Another look at the notebook reminds the salesman of his appointment, at ten, at that new Colonial house going up on Valley Road. "Not enough convenience outlets, at all, at all!" he noticed; so he had arranged to meet Mrs. Blakely, wife of the owner, on the premises at ten to show her what a real wiring job is like, and how little adequate outlets cost. Pulling his wiring plans out of his brief case, he demonstrates how easy it will be to put in convenience outlets even *now*. Dropping back to the shop with the order, the salesman picks up a vacuum cleaner and—

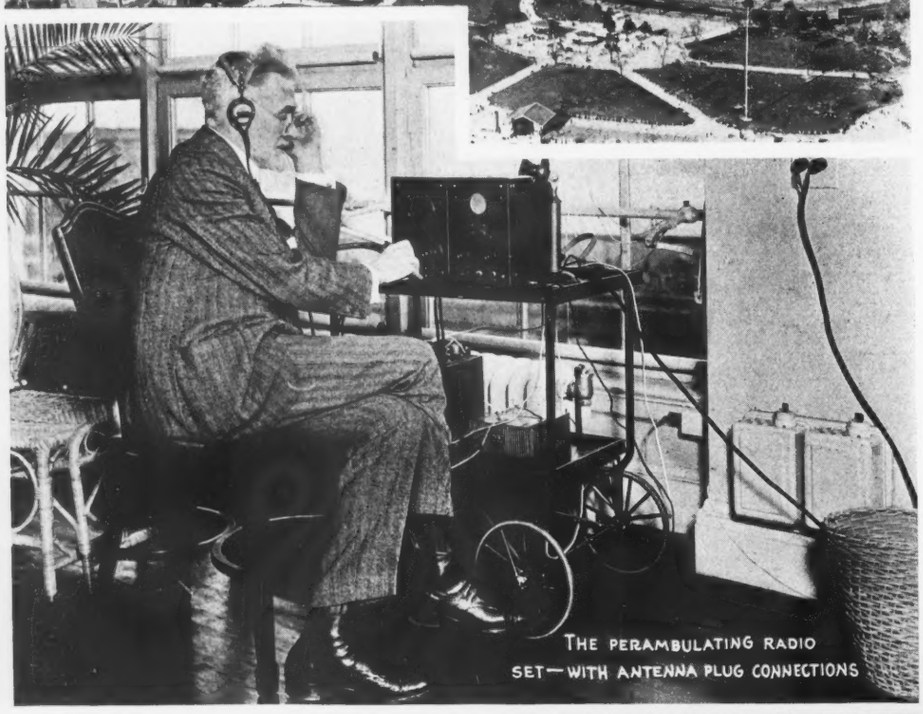
Skips out to see Mrs. Randolph, who saw the cleaner in the store, but felt skeptical about its ability to clean her own rugs. Half an hour to close this sale, but it's worth it. It's close to lunch time now, but—

He still has time to stop in at Mrs. Carlton's house. She had inquired about electric sewing machines a week before, and, after some protest, had permitted him to send one up for her to try. He finds her using it and another sale goes into the book to round out a well-spent morning.

* * *

And now, at the end of our program, we'll introduce our actors. The charming ladies, recruited from our own office, include, in the order of their appearance, Miss E. Anker, Miss Ruth Goode and Miss Florence Clauss. The salesman, including spring coat, trick notebook and trained briefcase, is played by H. W. Mateer of ELECTRICAL MERCHANDISING'S sales staff.

Henry L. Doherty's Home Electric de Luxe in



THE PERAMBULATING RADIO SET—WITH ANTENNA PLUG CONNECTIONS

ON TOP of a tall building overlooking the Battery and New York harbor there has just been completed one of the most remarkable homes in America—the residence of Henry L. Doherty, popular electrical man, president of a hundred or more electric and utility companies and latterly a leading oil producer.

Mr. Doherty's bachelor Home Electric caps one skyscraper, as shown, while a bridge leads to his "yard" and open-air playground on the roof of another. The dwelling proper includes, besides the spacious living quarters, the apartments for guests, sun-room, music-room, gymnasium, squash court, billiard room, electrical and chemical laboratories, and enclosed conservatories.

"Convenience Outlets to Service Every Square Foot of Floor Area"

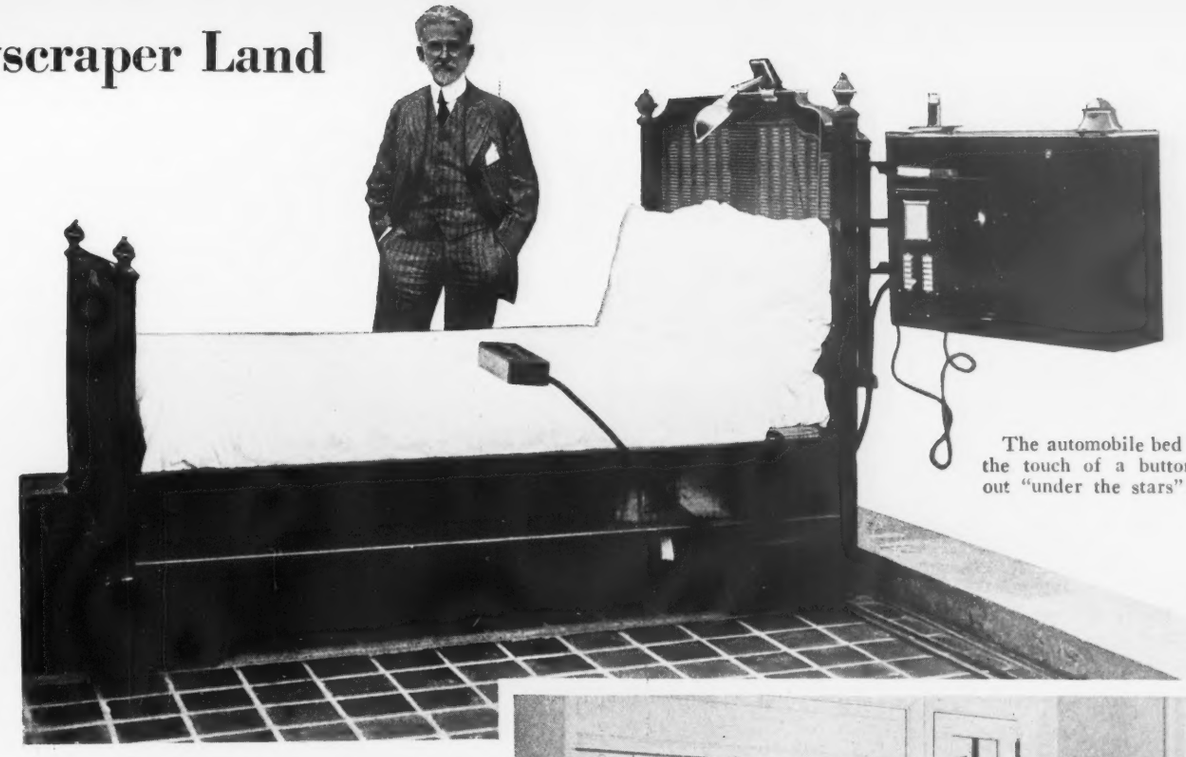
Some sixty-four "convenience outlets" are scattered through these rooms, Mr. Doherty having specified that he wanted "every square foot of floor area serviced by an outlet!" About the same number of plug receptacles are provided for his telephone, with its private line and direct office wire, so that the 'phone can always be at hand, wherever Mr. Doherty chances to be. There is also a house intercommunicating set, and another group of outlets cares for his push-button call. The radio set has a plug connection to aerial and "ground" in each of the principal rooms.

The photograph shows Mr. Doherty "listening in" for the radio weather report, to decide whether he will sleep out "under the stars" that night.

THE MUSIC ROOM—WITH ITS ELECTRIC ORGAN AND ELECTRIC PIANO

Electrical Merchandising Pictorial, May, 1922

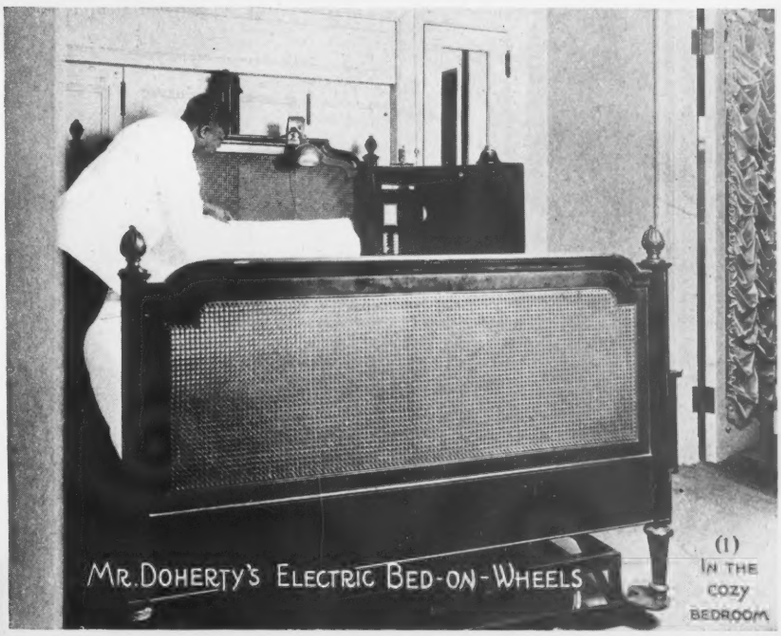
Skyscraper Land



The automobile bed which, at the touch of a button, travels out "under the stars"!

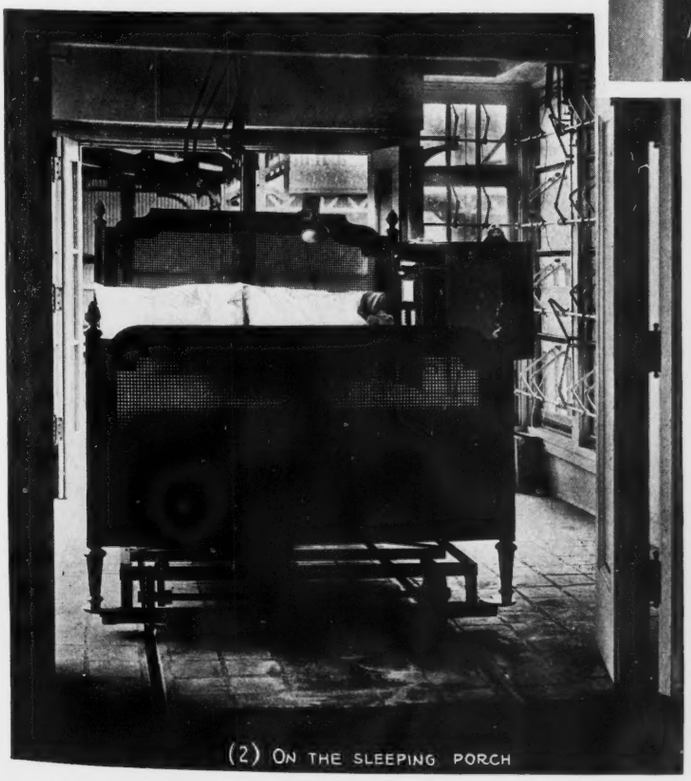
A distinct novelty in the Doherty house is the electrically driven bed which enables the master to indulge in fresh air sleeping without foregoing the comforts of a warm room on retiring or getting up. On the bed in the picture above is seen the control block with its pushbuttons for operating the bed, opening and closing the bedroom doors and porch doors, and manipulating the sleeping-porch windows. By merely pressing buttons the occupant, propped on the pillow, can "drive" the bed out onto the sleeping porch, close the doors behind him and minutely adjust the various sets of windows to his exact liking. Or if the weather is fine, he can "motor" on out onto the roof garden and sleep under the open sky. Pictures 1, 2 and 3 were taken from the same point in the bedroom and show the moving bed in its three positions. The swinging panel on the head of the bed carries both outside and house telephones, a writing desk, a book cabinet, etc., and there are convenience outlets in the head of the bed for supplying electric fan, heating pad, etc.

Physician friends who have seen this bed have suggested the usefulness of such an arrangement in hospitals for handling tubercular patients who need cold outdoor air, but cannot stand the exposure of going to bed on a cold outside porch.

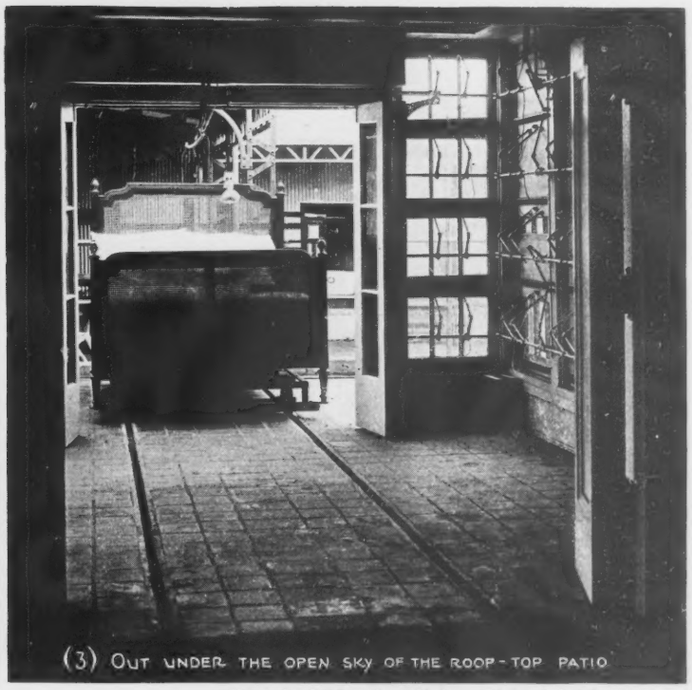


MR. DOHERTY'S ELECTRIC BED-ON-WHEELS

(1) IN THE COZY BEDROOM

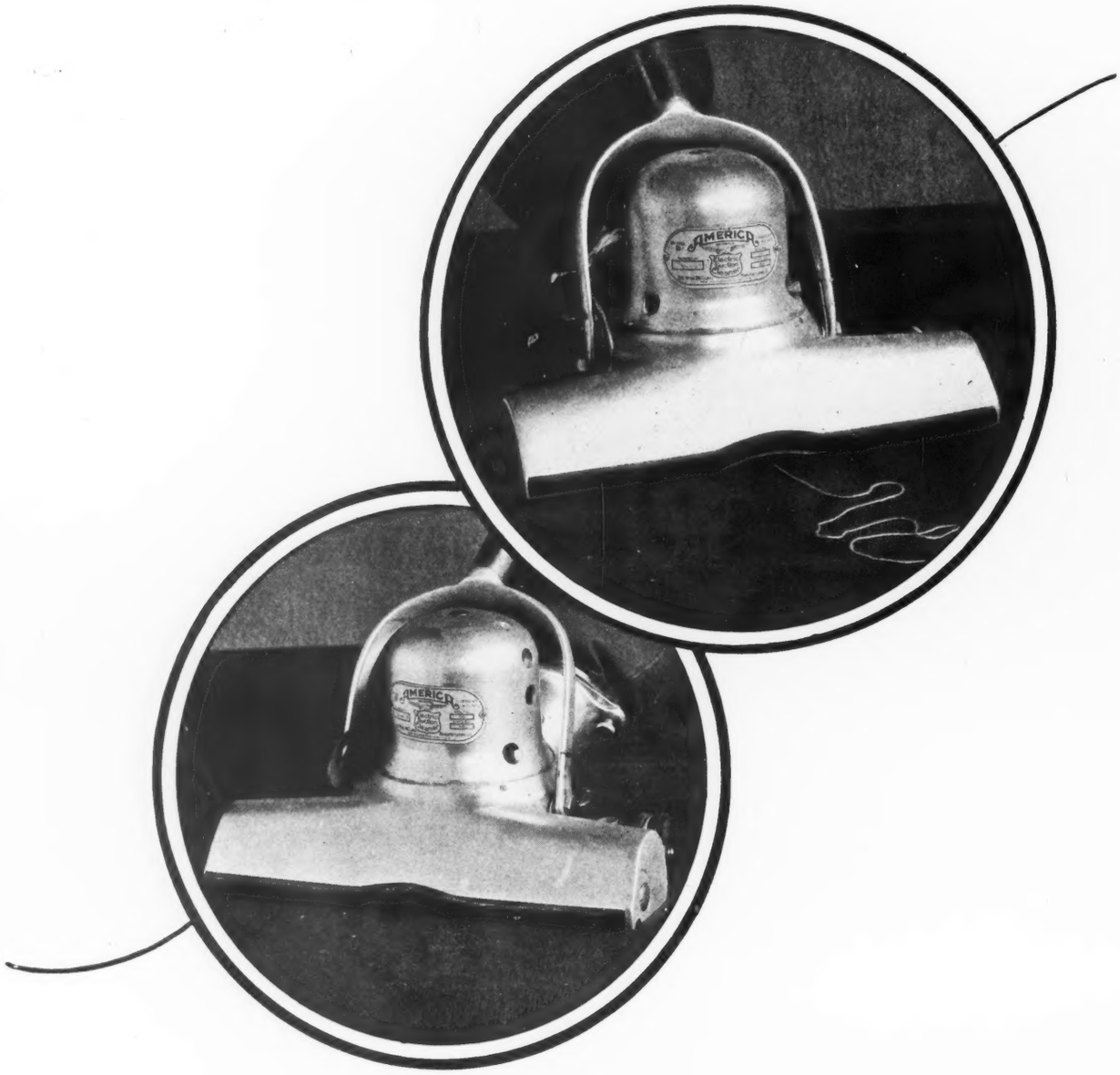


(2) ON THE SLEEPING PORCH



(3) OUT UNDER THE OPEN SKY OF THE ROOF-TOP PATIO

The America's



AMERICA
Over, Under

Front Air Arch

THIS is the famous patented arch that, in connection with the divided brush, offers a striking sales appeal. Threads, strings, ravelings and all litter can be picked up off the floor covering without lifting the cleaner. Simply pass this arch over the litter and the suction instantly draws it straight into the dustbag. It is not necessary to pick refuse of this kind off the floor by hand, nor off the brush, after cleaning work is completed. The demonstration of this unique and exclusive feature of the America has been the closing factor in many a dealer sale.

The Front Air Arch is one of the four exclusive features of the Good Cleaner America. A full description of America's Baseboard Dust Tunnels, America's Double Size Mouth and America's Two-Way Brush will be given in subsequent issues of this magazine. You will find them instructive.

The Real Meaning of "Over, Under and Thru"

"Over, Under and Thru" is a slogan that grew out of the satisfactory performance of America Electric Cleaners. It is not merely a catch-phrase. It is a statement of facts.

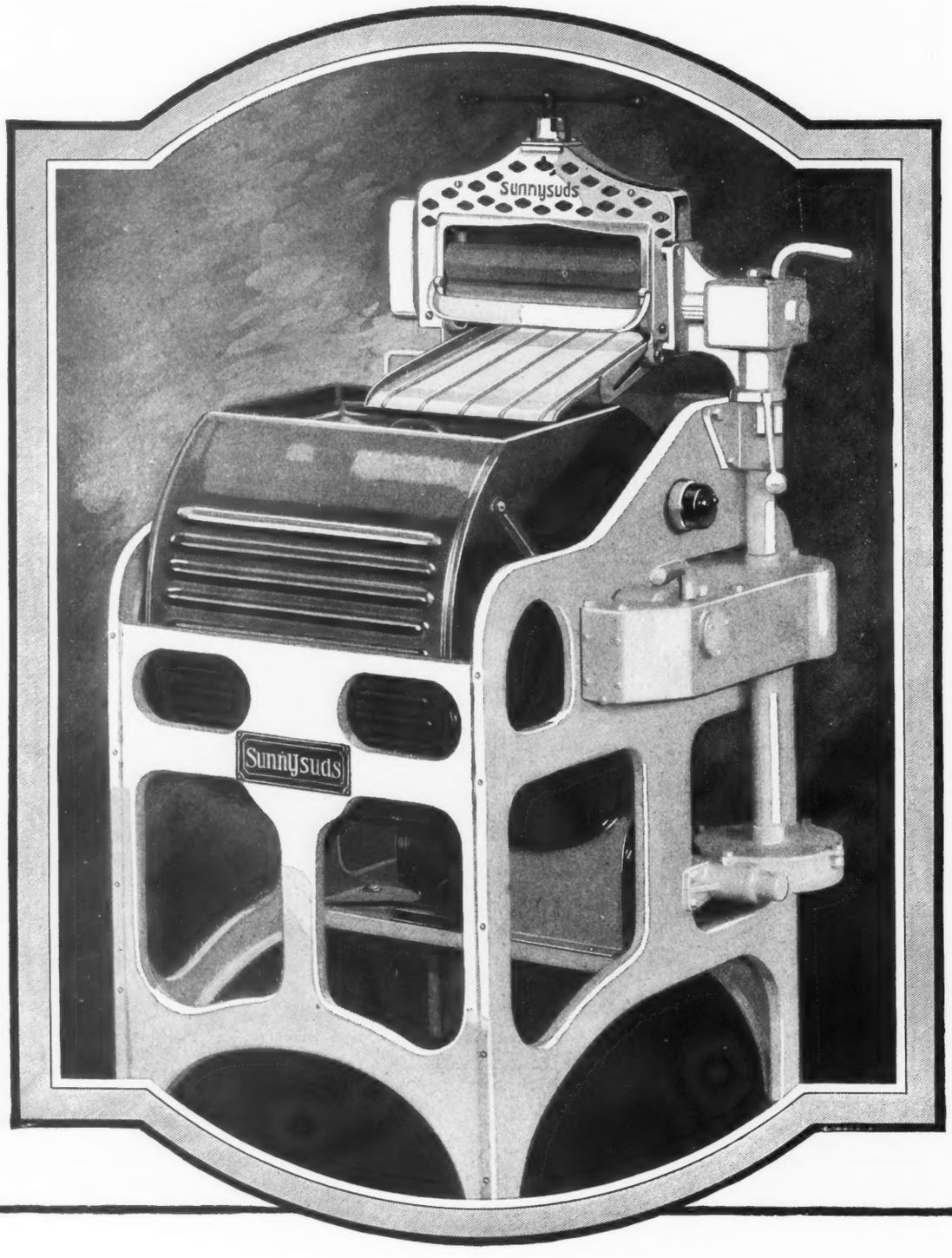
We have a sales proposition for the dealer who will get behind the America which will make him 100% profit on his investment. America's Financing Plan, plus America's 100% Profit, plus the Good Cleaner America, permit the live dealer anywhere to dominate his market. Are you that live dealer? If so, write us for particulars.

THE WISE-McCLUNG MANUFACTURING CO.
500 Eighth Street
New Philadelphia, Ohio
Chicago Office: 828 Kimball Bldg.

CLEANER and Thru

Electrical Merchandising Pictorial, May, 1922

More than 1000 Dealers



Share this Sunnysuds Success

Ten months ago the first Sunnysuds was shipped from our newly equipped factory. Since then 15,000 women in America and Canada have purchased the Sunnysuds and subjected it to the searching test of continuous and gruelling service.

That 10 months' service should reveal not a single fundamental weakness in the design and construction of the original Sunnysuds is real proof of the remarkable value embodied in the first standard size, all-metal cabinet washer to retail at $100.

This proof is strengthened by the exceptional growth of the Sunny Line Appliances, Inc., which has become in less than a year one of the leading manufacturers of electric washers, numbering its dealers in excess of 1,000.

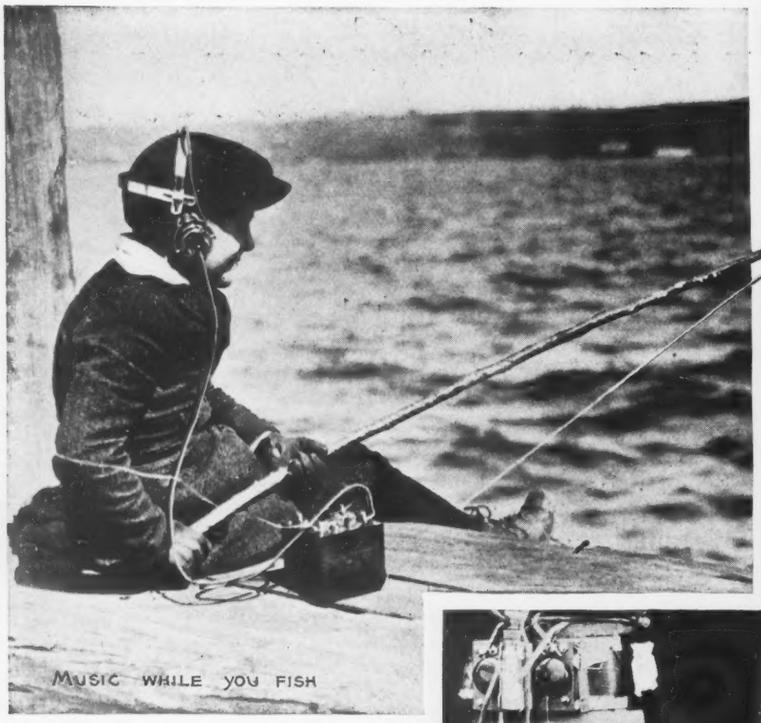
The original Sunnysuds proved to be a money-maker for aggressive dealers. The improved and refined Sunnysuds now being shipped will be even *more* profitable and give *greater* satisfaction to a greater number of purchasers. If you do not have a washing machine connection, or if your present connection is not sufficiently profitable, write today for the details of our franchise. We have facts that will convince you.

SUNNY LINE APPLIANCES, Inc., *Detroit, Michigan*
Canadian Factory: Kitchener, Ontario (26)

Sunnysuds
Electric Washer & Wringer

Electrical Merchandising Pictorial, May, 1922

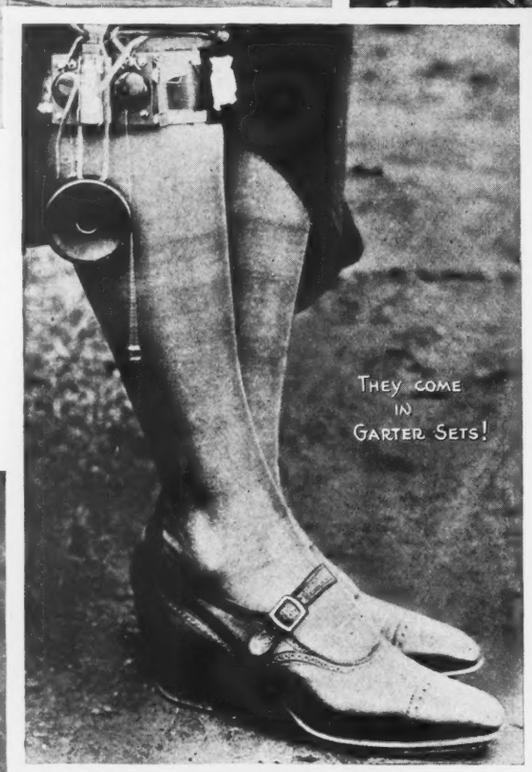
Radio Progress Viewed from Five New Angles



SINCE Jimmy Dunn, pictured above on a Saturday-morning flounder-hunt rigged up his fishing radio set, he doesn't care how long it takes the fish to bite.

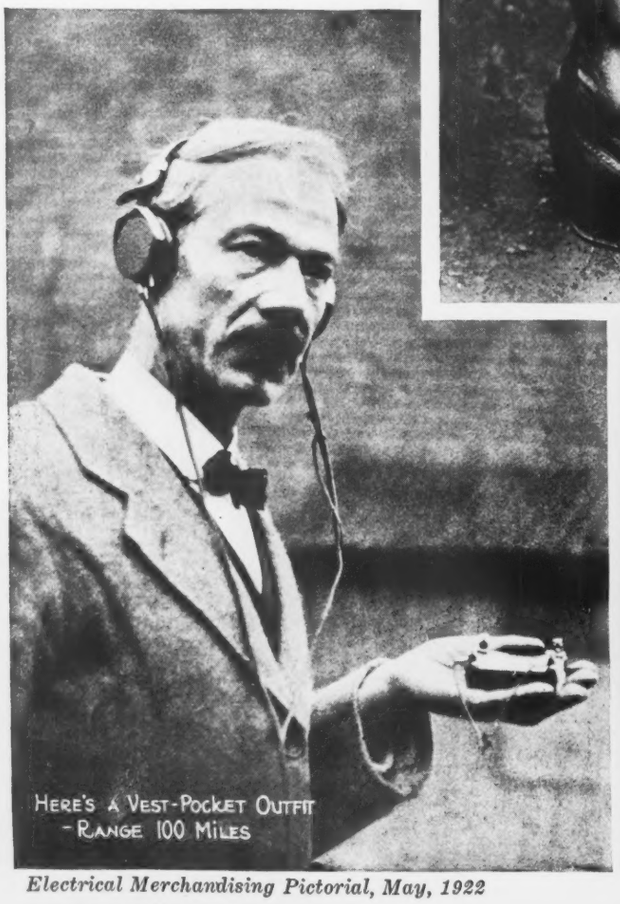
It beats all what a newspaper man will do to get a story! Walter Miller, of the *Seattle Post-Intelligencer,* designed, built and wrote up the garter set at right.

And down below we have an English inventor who claims his vest pocket set is the smallest in the world. With this outfit the scientist has received messages over a distance of 100 miles.



SOME Sunday evening when Elvira is visiting her aunt in Soda Center and you're real lonesome, you can tune up for an etherial osculation. In the snap above Miss Gladys Wyville is caught in the act of sending a kiss to someone whose identity she refused to reveal.

New York traffic cops have their push buttons and tri-colored lights to play with. But wouldn't you rather have a job like Bernard H. Linden's with a complete receiving set on your desk? Mr. Linden is a U. S. radio traffic cop in San Francisco, and keeps the ether lanes clear for important messages.



How to "Hook Up" Radio Sets

Some Helpful Points on the Sale of Radio Apparatus

By F. W. CHRISTIAN
Manager Radio Department, Electric Lighting Supply Company, Los Angeles, Cal.

TO THE average electrical man the most difficult part of merchandising radio outfits is the explaining of various pieces of apparatus to the prospective customer. At least one half of the purchasers of radio material are beginners and know little or nothing about the functions of each part. A good many people also wish to buy parts and assemble their own receiving sets, because this is a cheaper method, and because, also, they can become better acquainted with the parts and the place each one takes in the working of the set as a whole. The folks who do this have to be educated by the dealer. They want to know the best circuit to use and how each piece is connected up, and last, how to operate the completed instrument. Even those who buy an assembled stock set, will want information regarding the kind of aerial to put up, and also the tuning of the apparatus.

The larger dealer who has enough radio business to justify the employment of an expert to handle that department, need have no concern regarding this education of the public. For the smaller dealer however, who has nothing to help him but his own ability to learn, these pages are written, and it is the earnest hope of the writer that they will be of real assistance in building up the radio department to a profitable business in itself.

The Best Kind of Aerial to Use

Since in almost every instance where a set is sold to a layman, the dealer must describe the kind of aerial to use, let us first discuss the general construction and dimensions of this. For ordinary purposes, such as receiving concerts and amateur signals, an antenna seventy-five feet long, composed of four wires spaced eighteen inches or two feet apart will do very nicely. It should be at least thirty feet high, though much better results will be obtained if it is still higher. The wires should be carefully insulated at each end from the spreaders. For receiving, porcelain two-wire cleats or gg insulators will serve very nicely, but for transmitting, an electrose insulator is better.

The lead-in may be taken either from the center or from one end. In the latter case, however, the aerial will have a something of a directional effect and will respond best to signals coming from the direction opposite the end that the lead is taken off.

Occasionally a long-wave tuner will be sold for the reception of continuous-waves, etc., from over the sea or from our own long-wave stations in the United States. The best aerial in this case is a single wire, four or five hundred feet long, with an insulator at each end and supported as high in the air as possible.

There is a certain class of trade, beginners always, who will want to purchase low-priced crystal detector sets. Probably the first question such a customer will ask is how to hook it up.

Fig. 1 shows a circuit to use. *A* is the antenna and *G* the ground. *T* is a receiving transformer. The pointers *P* merely represent the variable switches on this transformer. On the left of *T* is the primary or outside coil and on the right *S* the secondary coil. A tuning coil may sometimes be sold in place

Fig. 1—A is the antenna and G the ground. T is a receiving transformer. The pointers P represent the variable switches on the transformer. A tuning coil may sometimes be sold in place of the receiving transformer, in which case P and P go to the sliders and the other two leads go to the fixed end of the coil. C is a variable condenser of about .001 micro-farad capacity, connected in parallel with the secondary coil S. D is the detector and F a fixed condenser. The 'phones R are connected in parallel with this condenser.

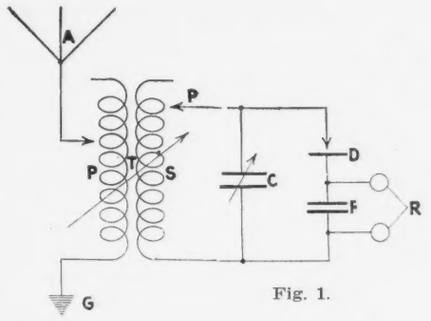


Fig. 1.

Fig. 2—This shows a widely-used circuit where a short-wave regenerative set is desired. V is a variocoupler, with primary B and the secondary S. C is a small variable condenser of about .0005 mf. capacity. D and L are a grid condenser and grid leak respectively. X is a grid coil of fixed inductance. F is the filament, E the grid and K the plate of the vacuum tube. M is a variometer, O and Q are batteries of 43 volts and 6 volts, respectively. H is a rheostat.

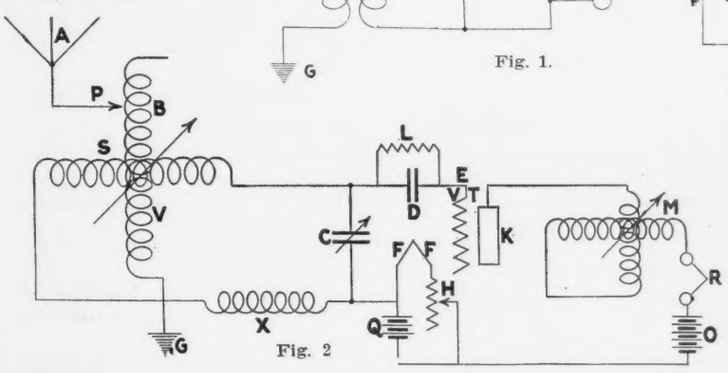


Fig. 2

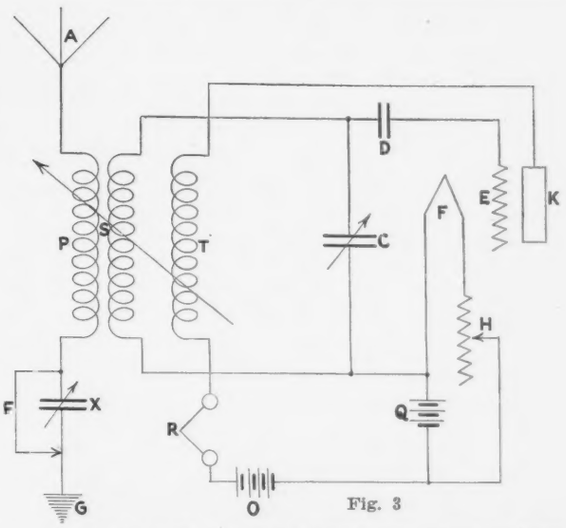


Fig. 3

Fig. 3—A "hook-up" for long waves. Here we have three honey-comb coils. P is the primary, S the secondary, and T the tickler. X is a variable condenser of about .0015 mf. capacity, with a short-circuiting switch F. C is the secondary variable condenser and has a capacity of .001 mf. The other symbols are the same as those in Fig. 2. The coil S may be on a fixed mounting but P and T should be mounted on swivel plugs so that their angle with S may be varied.

For extremely long wave-lengths from about 15,000 to 25,000 meters, No. 1,500 coils are recommended for primary and secondary, with a No. 1,000 tickler. For 8,000 to 15,000 meters, No. 1,000 coils may be used with a No. 750 tickler. Number 750 used with a No. 750 tickler will give from 5,000 to 12,000 meters. There are few arcs to be found below this.

Delinquent Accounts Reported Show Improving Conditons

The accompanying table shows the number of delinquent accounts reported during March to offices of the National Electric Credit Association by member electrical companies, together with the total amounts and the average amounts of the delinquencies. For purposes of comparison, the figures for March, 1921, and for the preceding months of February, 1921 and 1922, are also listed:

	Number of Delinquent Accounts	Total Amount	Average Amount
CENTRAL DIVISION			
February, 1921	726	$134,158.69	$184.79
" 1922	838	97,311.30	116.12
March, 1921	1,046	185,356.97	177.20
" 1922	978	98,569.53	100.79
NEW YORK			
February, 1921	272	50,339.00	185.00
" 1922	393	63,082.00	160.00
March, 1921	463	56,839.00	123.00
" 1922	643	72,842.00	113.00
PACIFIC COAST			
February, 1921	7	1,039.72	148.53
" 1922	14	806.45	57.60
March, 1921	17	6,696.78	393.93
" 1922	18	2,681.95	148.99

of the receiving transformer, in which case *P* and *P* go to the sliders and the other two leads go to the fixed end of the coil. *C* is a variable condenser of about .001 micro-fared capacity, connected in parallel with the secondary coil *S*. *D* is the detector and *F* a fixed condenser. The 'phones *R* are connected in parallel with this condenser.

The majority of beginners who start in with crystal sets soon become so interested that they will want to improve and get a vacuum-tube outfit. Some will wish to get parts for a regenerative audion outfit and others will merely want to add a control panel and tube to their crystal set. Such a control panel can be added by doing away with the fixed condenser *F* and the detector *D* in Fig. 1. Then connect the leads from the secondary *S* to the binding posts marked "Input" on the control panel. The 'phones are connected to the connecting posts marked "Output."

In the event that the customer wishes to buy the socket, rheostat and tube, and assemble them himself, one of the secondary wires goes to the terminal marked *G* and the other to the one marked *F* on the socket. These terminals *F* also go to the 6 volt battery, the rheostat being connected in series with one side. *P* on the tube socket goes to the high-voltage B battery and thence through the 'phones to the rheostat side of the 6-volt or A battery.

Circuit for Short-Wave Regenerative Outfit

Fig. 2 shows a widely used circuit where a short-wave regenerative set is desired. *V* is a variocoupler, with primary *B* and the secondary *S*. *C* is a small variable condenser of about .0005 mf. capacity. *D* and *L* are a grid condenser and grid leak respectively. *X* is a grid coil of fixed inductance. *F* is the filament, *E* the grid and *K* the plate of the vacuum tube. *M* is a variometer. *O* and *Q* are batteries—43 volts and 6 volts, respectively. *H* is a rheostat.

If a control panel is used, the secondary leads go directly to "Input" and the variometer is connected in series with the B battery. Should the purchaser desire to use two variometers, the condenser *C* may be left out and a variometer placed in series with the lead from the secondary, which goes to the grid of the tube. The circuit otherwise remains the same except that the grid coil is left out.

Occasionally a question will come up as to the best circuit to use for long waves. The writer has found from practical experience that the one shown in Fig. 3 is the easiest to operate and will give as good results as any being used at this time by amateurs.

Here we have three honey-comb coils. *P* the primary, *S* the secondary and *T* the tickler. *X* is a variable condenser of about .0015 mf. capacity with a short-circuiting switch *F*. *C* is the secondary variable condenser and has a capacity of .001 mf. The other symbols are the same as those in Fig. 2. The coil *S* may be on a fixed mounting but *P* and *T* should be mounted on swivel plugs so that their angle with *S* may be varied.

For extremely long wave-lengths from about 15,000 to 25,000 meters, No. 1500 coils are recommended for primary and secondary, with a No. 1000 tickler. For 8,000 to 1,500 meters, No. 1000 coils may be used with a No. 750 tickler. Number 750 used with a No. 750 tickler will give from 5,000 to 12,000 meters. There are very few arcs to be found below this wave length.

Operation of the Sets Diagrammed

The operation of the crystal set of Fig. 1 is very simple. The first thing to be done is to adjust the detector until a sensitive spot is found. While "listening-in" the secondary should be tight inside the primary. Tuning is done by means of the variable condenser and also by varying the amount of inductance in both primary and secondary coils. When the signals are brought in loudest, sharper tuning may be had by loosening the coupling, that is, by drawing the secondary partly out of the primary.

In Fig. 2 we first turn on the filament current, generally by means of a rheostat, which is advanced slowly until we find the place where the signals come in strongest without burning the filament too bright. The coupling of both the variometer and the variocoupler is critical and must be carefully adjusted to the desired signal. Tuning is done by means of the variable primary on the coupler and by the variable condenser in the secondary circuit.

The long-wave set of Fig. 3 is operated much the same in Fig. 2, except that the inductance coils are not variable. The primary is tuned by the variable condenser *X* and *S*, and the degree of coupling between *T* and *S* is very critical.

Where completely assembled cabinet sets are sold to customers, the dials will all be plainly marked and the above instructions for tuning and self-assembled sets may be used.

Once Upon a Time

Do you remember that cold, bleak occasion
When wife told you to stop at the store
And go to the notions counter and there buy
A package of safety pins? And you did,
And the haughty lady behind the counter
Asked you what size, and you didn't know;
And how the sweat started when she inquired
Whether you wanted large or small ones,
And you didn't know they came in different sizes?

* * *

Well—just remember it when some one
Wants to buy a fuse plug and is not certain
Whether he wants a ten-pound or a thousand-amp. one,
And don't make him feel as you did,
Discourtesy sometimes costs customers.

—*C. H. Huntley.*

How Securities Are Sold in Texas

ONE of the leading preferred stock salesmen of the Texas Utility Company is O. G. Osborne, auditor of construction. Up to the first of December last, Mr. Osborne had sold about 100 shares with prospects of going over the hundred mark during the next few days.

"How do you sell stock, Mr. Osborne?" he was asked.

"I know my stuff and talk like six-bits," came the reply.

"The first thing I want my prospect to understand is the fact that I know what I'm talking about," Mr. Osborne continued. "I tell him about our company, its conservative management, the growth of the organization since 1912 and the special questions printed on the poster handed out at the beginning of the campaign. The questions are:

"Are the products or services supplied vitally necessary to everyone?

"Will the demand for these products or services continue to increase?

"Can the business weather the stress of adverse conditions and circumstances?

"Is the property ably and economically managed?

"Is the security tax free, and is the income from it also free from tax?

"What actual property is owned?

"Does the company enjoy the confidence and good will of the people it serves?

"I answer all of these questions while I am talking to my prospects. I do not necessarily ask these questions, but I frame my talk around them so as to include the answer to every point in my conversation. I have memorized all of these questions and have what some people might call a stump speech. However, I don't talk like a candidate on a soap box for sometimes too much enthusiasm and talk kills a sale."

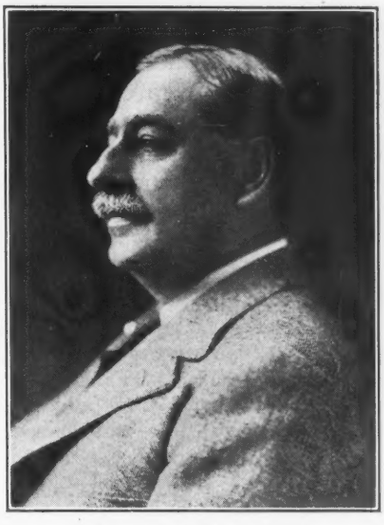
"Don't you ever run out of prospects?"

"No; there is no excuse for that. When I sell a prospect, I ask which of their friends might also be prospects. I always have an inexhaustible supply of prospects by following the procedure."

The secret of success, Mr. Osborne said, is knowing your "stuff" and not being afraid to tell the story. Some employees fail, he said, because they think a man should be closeted in seclusion before he can be interested in preferred stock. Experience has shown Mr. Osborne that the more public the place of conversation, the more the prospect is likely to buy.—*Texas Utility News.*

Colonel Byllesby Says:

"Electrical Industry Is Entering Greatest Era of Growth"



COL. H. M. BYLLESBY

SOUNDING a note of distinct optimism Colonel H. M. Byllesby, president of the investment banking business which bears his name, recently told members of the Electric Club of Chicago that there is no limit to the expansion of the electrical industry and predicted that the future growth of the business will be far greater than its past.

Speaking of general conditions, Colonel Byllesby said: "The financial strain is passing—the worst is over. People have faced their losses and from now on there will be a distinct and increasing improvement. There will be no sudden jump from the one extreme of depression to the other extreme of great prosperity. It will be a slow, steady growth—and a certain one. Collections are improving. Buying is increasing and we are on the up-grade.

"During the past five years the electrical industry has literally been forced to starve itself. There never was a time in the history of the industry when our generating equipment, transmission line equipment and distribution systems were so greatly overloaded as now.

"There is a tremendous demand for electrical service of all kinds just waiting for the opportunity to secure service. This will result in unprecedented activity in the construction of new generating stations and distributing equipment of all kinds within the next few years, entailing an average annual expenditure of half a billion dollars or more for years to come."

Appeal to Small Home Owner, at The Dalles, Ore.

OREGON'S second "home electric" was held under the auspices of the Northwest Electrical Service League at The Dalles, during the winter, and brought before the people of the community the advantages of "doing it electrically" in a new and emphatic manner.

During the three days of the exhibit a large percentage of the homeowners and those contemplating building or buying attended. A group of girls from the domestic science department of the local high school demonstrated to the visitors the various "electrical servants" and were assisted in preaching the electrical idea by representatives of the Northwest Electrical Service League and the Oregon Association of Electrical Contractors and Dealers.

The living room contained the latest developments in lighting fixtures, an electric piano and a fire log.

In the dining room were displayed the various table and buffet appliances, and the breakfast nook demonstrated the opportunities to cook and serve a complete meal without the necessity for the housewife arising from the table.

Particular attention was given to the kitchen where a small range, a dishwasher and various food mixers attracted considerable interest.

In the sewing room, containing a portable electrically driven sewing machine, a vacuum cleaner and several other appliances, the demonstrator was kept busy explaining to the women how simple in operation is the utility motor and how much energy it saves for the housewife.

The laundry proved to be the most popular room for the women visitors. The electrically heated and operated ironer attracted more attention than any other feature of the exhibit, and a number of immediate sales could be traced directly to the interest created at the "home electric."

As a result of the "home" at The Dalles, the people of the community and surrounding territory have a new realization of the importance of their electrical industry and a keener appreciation of the advantages of using electrical servants. On the other hand, the members of the industry have an increased interest in co-operating to give better service and furthering the progress of electrical development.

Plan Now for Your Summer Business in

Better School Lighting

By CHARLES L. MOSHER
Superintendent of Schools, Saratoga Springs, N. Y.

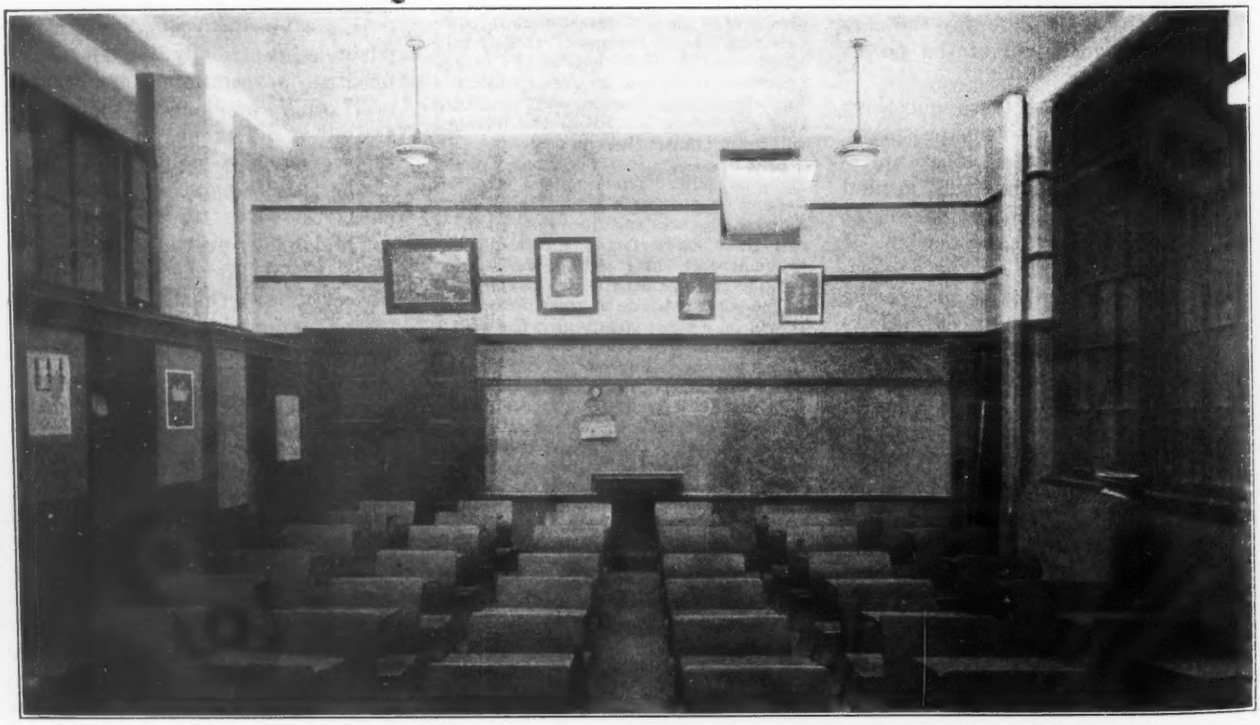
SUMMER VACATION is the time when most repair work and building improvements—including wiring and re-wiring—are done in the public schools. But *Spring* is the time when the electrical contractor who sees a real need for better lighting in his local schools, should start the ball rolling—tell his story to the local school authorities and see that action is taken *before* the vacation begins.

Speaking from the school superintendent's point of view, I think I may say that the biggest need I have found in getting wiring improvements done in school buildings is the right kind of co-operation from the electrical contractor. By co-operation I mean here both the making and the accepting of helpful suggestions. The superintendent of schools who wants and needs to make his building more nearly what it should be by providing better lighting is only too often met by electrical men of these two types: Either the electrical man thinks he knows at once everything about the whole problem (though he may never even have been in the building, and may not understand its uses) and is ready with an immediate prescription; or else he goes to the other extreme and relies entirely upon the patient who has called him in to say what medicine is needed.

SCHOOL superintendent points out opportunities for real service as well as summer business for the electrical contractor, but makes plea for closer cooperation with the school authorities.

Neither of these approaches is what the superintendent wants. Any school superintendent or school principal worthy the name knows that the multitudes of duties which have filled his days have not left him time to keep up with the constant changes and improvements in electrical service—even if he once did teach physics. On the other hand, his accumulated knowledge of the kinds of service which the school building is called on to render puts him in a position to contribute not a little to solving the lighting problem. The superintendent has, too, a better idea of the resources available. He knows whether the work is to be a permanent improvement, or whether it is a necessary but relatively temporary expedient.

In short, the electrical contractor actually needs what knowledge the school superintendent can give him in planning the best wiring job for



In the words of School Superintendent Mosher: "If you want a school wiring job, first learn all the conditions by personal inspection; find the results of children's eye examinations; ask how the building meets the state laws on lighting; make some tests; and after all this draw up, and have ready, plans to meet the needs as you see them.

the purpose. I know from my own experience how heartily the school superintendent would appreciate the right kind of cooperation. One of our electrical contractors has never got a school wiring contract because he has never done more than hand in his estimate based on his own unaided conception of what was required. On the other hand, another contractor got me into a pretty mess by doing a job according to my own ideas, without offering a single helpful suggestion when he must have known what the result would be. Later, we had to run a new line and larger wires to supply the current for the larger lights needed.

In many instances, the superintendent will be wrong in his ideas; he will want more for the school board's money than he can have; he will think many of the underwriters' rules nonsensical obstructions.

It is up to the contractor to put him right—not by *telling* him, but by *showing* him.

Study the School Needs First; Then Make Suggestions

What the electrical contractor handling a school wiring job should do is to learn all the conditions, from all sources, before making his suggestion to the school authorities. He should be sure that his plan is the most helpful possible, since it was made in the light of all facts. Then he should spread his ideas; follow them up; ask if the children's eyes have been examined and what was discovered; ask how the building or the school rooms meet the state law on lighting; make some tests, if he can, to see how the light in the well-lighted part of the school-room compares with that farthest from the windows.

And after all this has been done, he should draw up and have ready plans to meet the needs as he sees them—plans which he can show are in accord with basic principles. Getting the plans made is itself a step which gives the project a great impetus toward getting it accepted by the school authorities. A good idea is like rolling snowball—it rolls up fast when once started.

Of one thing, at least, the electrical contractor can always be sure. The school superintendent is his best backer when it is a question of making genuine and needed improvements in school buildings—with respect to better lighting as much as to anything else.

How to Use Electric-Light Wires as Antenna to Receive Space Radio

ON MANY electric-light and power systems, it is possible for the amateur to use his local electric-lighting wires in place of an antenna for receiving radio impulses broadcasted through space from distant radio stations. In thus using the wire system as an aerial for the reception of space radio (a wholly different process from that of the "wired wireless" of General Squier, described on a preceding page of this issue) the amateur must be careful to connect in protective devices, such as a condenser and a fuse, to prevent possibility of damage by the lighting current.

The electric-lighting company which serves Staten Island, New York, has made a point of acquainting its customers with the best method of thus utilizing its lines as aerials, and in a display advertisement April 13, issued the following statement:

The Richmond Light and Railroad Company, through its receiver, John J. Kuhn, announces with pleasure to people of Staten Island that its engineering department, has succeeded in using its distribution system as the antenna for receiving radio telephone signals and messages, and offers the following suggestions to amateurs desiring to experiment along these lines.

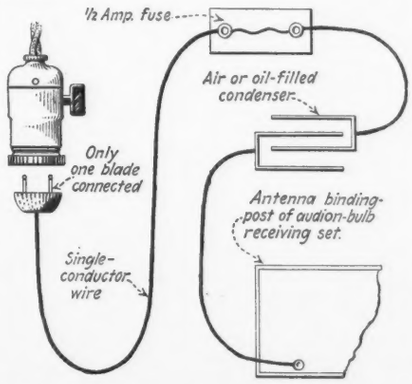


Diagram showing how the amateur can tap electric-light wires for use as radio antenna, in place of usual roof-top aerial. The condenser and fuse protect the receiving set against injury from the lighting current.

First:—Successful results have been obtained so far only with audion bulb sets. Crystal sets receive the signals but for some reason are very weak and indistinct.

Second:—No set should be used on this system without air or oil-filled condensers, placed in series with either the antenna circuit or the ground circuit—preferably in the antenna circuit.

Third:—A fuse not heavier than one-half ampere should be used in series and just ahead of the antenna connection.

Fourth:—An ordinary separable attachment plug, i.e.—one with two blades connecting the two separate halves of the plug, is used. Only one wire is run from this plug, the other binding screw being left undisturbed. This single-conductor wire should be long enough to reach from a handy electric-light socket to the table where the instrument is located and should terminate in the fuse mentioned above. In case an externally-connected condenser is used, the circuit should be run from the fuse to the condenser and from the condenser to the antenna binding post of the receiving set. In sets where the condenser is built into the instrument the connection from the fuse is run directly to the antenna binding post. All other connections should be exactly the same as for conventional overhead aerial receiving.

Screw the attachment plug into the electric-light socket and tune as usual. In case no signals are received reverse the blades in the attachment plug by simply pulling the attachment plug apart and turning the lower half half-way around.

Caution—Under no consideration should the connection from the electric-light socket be brought directly into contact with the ground connection, or fuses will be blown in the house circuit and the whole house left without light. Operators should also be careful about making contact themselves bodily with the electric-light wire and ground at the same time, in order to avoid shock.

The Richmond Light and Railroad Company will be interested in hearing from amateurs receiving over their circuits and will appreciate letters or postal cards advising them of their success and of any discoveries, or making suggestions tending to make this method of radio reception more successful.

Those desiring to communicate with the Company's engineers concerning these experiments can call "Tompkinsville 2300" between 2 and 4 p.m. on week days, except Saturday, and ask for the experimental testing laboratory. Experiments are being conducted in this laboratory with a view of using the electric-light circuits for relaying messages received from stations some distance away, which are not now audible on the average amateur set. Also, experiments are being made with a view of doing local broadcasting over the electric-light circuits themselves, which will be audible only to those receiving over electric-light circuits lighting.

Any success attained in these experiments will be announced to the public so that amateurs may avail themselves of the advantage so given.

The use of radio as above described does not consume any electric current.

How Underwriters' Label and Inspection System Lowers Quality and Destroys Good Will for Product and Service

A Personal Interview with WILLIAM L. GOODWIN

"I HESITATE to express an opinion on this subject," explains Mr. Goodwin, "because so many people read or hear only a part of the story, form hasty opinions one way or the other, and then personalties become involved.

"In spite of the War and its teachings there are still evident the outcroppings of nature's instinct of 'selfishness.' Almost everyone engaged in a discussion of this kind views the matter and builds his arguments largely from this angle of self-interest. Hence, we do not always get a clear picture of the situation as it affects the industry as a whole. Heated arguments and hasty opinions, may confuse rather than clarify, particularly since there is an abundance of 'propaganda' being carried on from the ultra-conservatives. For the purpose of this discussion let us define the 'Ultra Conservative' as the fellow who has his cake and will neither eat it nor share it with others. We must grant that there is something wrong with our electrical industry house and all are anxious to put the house in order. The manufacturer says that distribution costs too much and that margins must come down. The jobber, contractor and dealer say there is no profit in the business. The consumer is ignorant of the technic of the business and can't tell who is right. After all the consumer usually gets what he pays for—never more and seldom less. What is the answer—I say it is 'The System'—and by 'System' I mean the whole so-called 'Underwriters'' System.

First. The form of organization that controls (which even the conservatives will admit is fundamentally wrong — hence everything which emanates from it is also wrong, at least in part).

Second. The Code itself and the system of its enforcement.

3rd. The Label service.

"Fortunately I am in a position where 'selfishness' does not enter, hence I am willing to attempt, at least, to throw some light on the subject, with the qualification that—

"No harm can come from a frank discussion of this whole subject. If the System is right discussion will develop this fact, and its continued operation will be most beneficial to all concerned.

"If the System is wrong discussion may lead us out of the woods and into an atmosphere of freedom and opportunity.

"In the final analysis that which is best for the public is best for the electrical industry. To my mind the present system can be greatly improved. In its present form it is not in the public interest, certainly not in the interest of the advancement of intelligent electrical service.

"Why continue to tolerate it if we can find a way to remove the faults yet preserve its virtues.

"So let us think this thing through from start to finish before we take sides.

"My job is to promote the common interest of electrical people in advancing the idea 'Do it Electrically'—Code or No Code. How to promote this idea and make it worth while for everyone to help is the big job—Does the Code help us? Let us see."

"In starting our discussion of the Underwriters' inspection and label services and their effect on the quality of electrical products," said Mr. Goodwin, "let us set down these general principles:

"First—Civilization imposes protection of life and property; it demands the conduct of business according to certain recognized ethics, and places upon business the responsibility of public service.

"Second—The protection afforded should be of the highest available quality, the most effective that can be evolved from the viewpoint of an economic balance, and should be valued accordingly.

RECENT articles in *Electrical Merchandising* on the subject of the Underwriters' policies and practices and methods — pointing out the lack of sympathy of the Underwriters' system with the aims of the electrical industry, and showing the ways in which the Underwriters through their prohibitory clauses, rules, inspectors, etc., add to the troubles of the electrical business,— have brought to the editors of *Electrical Merchandising* the heartiest expressions of approval and support on the part of leading electrical manufacturers, jobbers, contractors, dealers and central-station men from all parts of the country.

THESE leaders in each line testify the warmest possible interest in *Electrical Merchandising's* course in directing the white light of publicity upon the evils which have grown up through the Underwriters' practices, but individually they frankly admit to us that so powerful and so entrenched is the Underwriters' system that no electrical man in active business today would dare to express in public a criticism of the Underwriters' methods at the risk of himself being put out of business or having his business crippled.

FORTUNATELY *Electrical Merchandising* does not depend upon the Underwriters' approval for existence. And although our very friends who are suffering the most bitterly from the Underwriters' system, obviously are unable at this time to give public expression to their own views, as they voice them privately,— we do feel ourselves fortunate in presenting William L. Goodwin's interview.

Mr. Goodwin's fearless and unselfish devotion to the cause of electrical development is too well known to need extolling here. Mr. Goodwin has personally been making a study of the Underwriters' methods for many years and has collected much evidence. After many requests on our part he has consented to give the following remarkable interview only on the basis that his comments be taken as constructive in purpose and with the understanding that a frank discussion of the subject can do no harm if the Underwriters' methods are sound, but may help eliminate the weaknesses while retaining the virtues — if on sober study the points developed are well taken.

Editor, *Electrical Merchandising*.

"Third—The establishment of minimum standards, as set up by the National Electrical Code; and the supervision and inspection standards based on such minimum requirements serve, not to supply the highest degree of safety to life and property, but rather to establish a minimum limit of protective service below which it is admittedly dangerous to go.

"Fourth — No objection can be raised to certain supervision and inspection standards, if there is *an incentive* provided to *better the minimum*. But if such incentive is not provided, the minimum standard serves to retard progress and tends to become dangerous and harmful in course of time.

"Fifth—The absence of any incentive to better the quality of products (materials) by the establishment of only minimum requirements, not only destroys initiative, but invites the exercise of ability and skill toward a limitation of quality to that required or specified. That is, ability and skill are exercised to attain the minimum standard with the use of the cheapest possible material, sacrificing all possible improvement in quality to mere reduction in costs.

"Sixth—The National Electrical Code as revised to date and as interpreted, is a patched-up document replete with contradictions and requirements based on various and differing standards — mechanical, electrical and physical. Practices are allowed which, if not exactly dangerous, are very close to the border line of safety, while other practices which include the most generous margins of safety, are prohibited. This situation is traceable to the failure of the Code (which was originally drafted for a limited and now largely obsolete *lighting* practice *only*) to make provisions for and to take cognizance of developments in the electric appliance field.

"Seventh—The electrical industry is a youngster in the activities of mankind but it has been a forward child, outgrowing its swaddling clothes in very short order, among them the National Electric Code as drafted and interpreted at the present time.

"Eighth—Rapid as has been the growth of the electrical industry and great as have been the contributions of its electrical engineers, the industry has been handicapped from the start by a decided deficiency of mechanical engineering talent. There has been no inducement for the mechanical engineer to interest himself in electrical work—for the reason that the adoption of the minimum and virtually mandatory standards by the electrical profession prohibits the exercise of initiative and reduces the conduct of the electrical business to one of price competition—quality of materials and equipment being standardized and service controlled by *certificates of inspection based upon minimum requirements.*

"Ninth — Standardization in the electrical industry has in large measure ignored mechanical requirements and has been based almost entirely upon those of an electrical nature, with the result that wiring devices and electrical appliances meeting Underwriter specifications are apt to fail mechanically rather than electrically. As there is little relationship between the mechanical or physical properties of materials and their electrical properties, violations of mechanical requirements are common in fixtures and fittings based upon and approved for electrical properties. This is one of the chief causes of defective electrical apparatus and is countenanced under a policy requiring usually only a laboratory test for electrical certification.

"Tenth—While there can be no objection to minimum standards provided they are made mandatory, progress demands a recognition by reward of higher standards, better products and greater service. This is denied by a policy based on certification and equal approval of any materials and craftsmanship meeting a given *minimum* standard or grade.

"Eleventh—The removal of incentive for the attainment of better and higher standards by the underwriter's label discourages progress and invites dishonesty on the part of those engaged in the installation and distribution of electrical apparatus. Quality is standardized at a minimum, service is governed by certificates of inspection based upon *low standards*, and *competition degrades to one of price only.*

"Twelfth—Activities in the electrical contracting field have created a situation tending toward original installation at cost or below, and impositions in charges for subsequent repairs and maintenance. This is aggravated by the low quality mechanically of merchandise meeting Underwriter requirements, indifference of electrical inspectors developed under the present requirements, and ignorance on the part of the patronizing public."

Conceding the Past Usefulness of Underwriters' Supervision in the Early Days of the Electrical Industry,— Practical Working Experience with the System now Shows

How the Underwriters' Label and Inspection Service

Levels all products so controlled.

Destroys good will for individual manufacturers' products.

Puts jobbers on purely price-competition basis with respect to lines controlled.

Removes initiative for improved design.

Takes from the competent electrical contractor his selling arguments and reputation for "quality electrical work" and superior service.

Policy, Product, and Service

"Since the foregoing statements are general in nature, it might be well to enunciate a few general, yet fundamental principles upon which business is founded and so recognized by the public—assuming such businesses to be manufacturing, wholesaling, contracting or retailing. I take it that the component parts of a business comprise: *Product, Policy and Service,* the sum total of which in the public mind is **Good Will.**

If we analyze these sub-divisions of business and appreciate how each is affected by the operation of the Code and inspection system as a result of the operation of the system for more than twenty years, we commence to appreciate the reasons at least in part,

for many of the difficult, intricate situations which we encounter and the growing tendency to make these situations more difficult of solution.

PRODUCT

"The Product of many business institutions may be so thoroughly established in the public mind, that successful and continuous development of the business is possible even though the manufacturer or producer of the goods is little known. But I am satisfied that the production of quality product to the end that the product will be firmly established in the public mind, is the foundation of the three divisions of our business previously mentioned.

"But under the operation of the present system in the electrical business it is becoming more and more difficult to firmly establish product in the public mind. Combating competition which is becoming keener, through the process of the Underwriters' Label, *is bringing distinctiveness of product down to a level,* so that there is practically no choice on the part of the consumer as to the merit of one product as against another.

POLICY

"Policy I take to cover those subdivisions of a business not covered by Product, which might include personnel, capitalization, physical properties of buildings, equipment, personnel of the selling organization, etc. The combination of all of these elements contribute to the stability of a business, gives it prominence in the public mind, and permits it to perform public service.

"In every line of endeavor *where the consumer is the sole judge of product or policy, businesses have grown to great proportions,* but there is little or no capital value to policy where the present Underwriters' and inspection service prevails.

SERVICE

"Service I take to mean the ability of an institution to maintain satisfied customers by the furnishing of products or facilities in accordance with the standards established in the public mind."

Good Will, the Greatest Asset of Any Business

"Good Will being the summation of the three previous subdivisions brings us to that indefinite, intangible part of a business which induces the public to continue its patronage with established contacts over long periods of time.

"The great asset of any business is Good Will and it can be and is capitalized. If we analyze Good Will, we find that an established company with such a reputation in the public mind can overcome usual failures or deficiencies through failure of a specific product for temporary periods. Good Will ofttimes offsets product of inferior merit. Good will ofttimes offsets faults in policy, temporary periods of insufficient capital, and other natural operating delinquencies brought about through failure to maintain the continuity of the personnel. Good Will likewise makes up for many deficiencies in service, occasional failures to deliver when promised or such other delinquencies as occur from time to time in most businesses."

The Jobber's Operation Rapidly Being Reduced to One of Price Competition

"This brings me to the next point. The intermediate contact between the producer and the installer has been the so-called jobber or middleman. In the past, the middleman has not only performed a valuable service in the distribution of product but he has been a tremendous influence and an important factor in the stabilization and development of the business. Through operation of the present Code and the highly competitive system which is being developed, each of the various factors which make up the business, namely, Product, Policy, Service and Good Will, are fast being withdrawn from the jobber and his operation has been reduced almost entirely to one of price competition. This must in time, if it has not already evidenced itself, react upon the manufacturer in product, policy and service. In order to meet the demands of the jobber, the tendency is for the manufacturer to continually reduce standards.

"Policy is being affected in that many of the valuable assets of the established companies must be eliminated in order to reduce overhead."

"Recognizing the contractor-dealer as the agent rendering the combined service of installation and merchandising, my contention is that if the retail division of our business is founded on the basis of good-will, we would develop merchants with ability to function both in respect to installation and merchandising. The difficulties encountered in developing this situation are due primarily to the fact that *the irresponsible contractor working under the subterfuge of labels and inspection* and without regard to good-will *does business on price only* and therefore purchases materials solely upon a price basis. This tends to depreciate the importance of value of the contracting business and makes it of little interest to a competent merchant or competent man equipped with a foundation of business qualifications.

"In fact it is next to impossible to locate any recent entries into the exclusive business of contracting within recent years. Those who have been in the business for a long period of time and have established a reputation for good-will are barely able to hold their place in the procession of competition. In a number of cities in which careful surveys have been made, we find that as high as 80 per cent of the so-called contractors are not even recorded in the local telephone directory. They take out licenses, apply for permits and seemingly disappear, immediately after their final certificates are received. Continuing these surveys further, we have found that this type of contractor is generally unknown to the established manufacturers, jobbers and other contractors. Their material is purchased largely from cash houses, and invariably they seek the lowest priced goods obtainable, which invariably reflect the lowest quality.

"The competition to the established contractor from this type of concern is becoming more and more serious. It is not, however, of recent origin, but reflects a condition which has maintained over a long period of time. I have personally consulted jobbers in every section of the country and have talked with many hundreds of contractors, and there does not seem to be any answer to the question other than a unanimous expression of opinion that something is radically wrong."

"NO harm can come from a frank discussion of this whole subject of the Underwriters. If the system is right, discussion will develop this fact, and its continued operation will be most beneficial to all concerned.

"If the system is wrong, discussion may lead us out of the woods and into an atmosphere of freedom and opportunity.

"If we can find a way to remove the faults of the system, yet preserve its virtues, why continue to tolerate the faults?

"Let us think this thing through from start to finish, before we take sides."

Under Underwriters' System Contractors Cannot Offer Sales Argument for Quality Work

"The contractors were so thoroughly sold to the underwriter system in the early days and have accepted it as such a matter-of-fact procedure that the very mention of it to them meets with the response that it is impossible for them to do anything. Anyone can secure a license, or as the practice prevails in most sections, no licenses are required, and where inspection prevails, intelligence or knowledge of the business is not necessary. No matter how many faults appear in the work, the inspector does nothing more than place a violation on the job, which permits you to remove the violation and have your work approved.

"Since there are no penalties imposed on violations, other than a slight expense for correction, there is no reward for intelligence or knowledge of the business. If violations carried penalties that affected the good-will or capital value of a business then a violation would really mean something. Then we would have real penalties for violations which indicate ignorance and incompetency."

"Under the system as developed the contractor cannot offer sales argument as to the product supplied or the intelligence or service acquired after years of effort in business building. And policy is of no avail since craftsmanship cannot be capitalized.

"In the merchandising branch of the business there is still an opportunity to employ each of the component parts which build for stability in business, and we have noted much progress in this branch of the business.

"Very recently there has developed a tendency for approvals of appliances through testing bureaus of women's magazines, newspapers and other institutions, and already this tendency is setting up in the public mind a measure of value of products which, if not checked, will ultimately have the same effect upon the purchaser and the industry as we now suffer through the same practices applied to wiring materials. Fortunately, however, there is no mandatory power granted to anyone—hence the tendency if it grows may never be as serious as that now applied to wiring products where the insurance companies go through the motions of threats of fire-insurance cancellation."

"Insofar as the application of the whole broad principle of the underwriter idea is concerned, unquestionably it fails, all things considered, to function now, as it did in its early days when outlets could be measured in terms of definite wattage consumption. The introduction of the various appliances has entirely destroyed the relation of capacity to utilization.

Does Anyone Know of Cases Where Insurance Has Been Cancelled Because of Code Violations?

"I have made inquiries in many directions, from all kinds of sources, and have tried to ascertain the number of cases where various insurance companies have cancelled policies due to violations. I have conferred with insurance people in many of the principal cities from Boston to San Francisco, and I have not been able to find where insurance was cancelled because of violations of the code, although yet such violations are evident everywhere.

"It would also be interesting to ascertain, if it were possible, the percentage of materials, produced by the old-line manufacturers, which are purchased exclusively by electrical contractors or users who are compelled to submit to the underwriters' mandate. In so far as my observation and investigation lead me, I am of the opinion that a great quantity of the better grades of material are finding their way into industrial institutions, public utilities—central station, railroad and steamship properties—and into Federal and municipal institutions where the minimum requirements of the underwriters are generally disregarded."

"In the early days when personal relationships had a considerable bearing upon trade development, Code and inspection evils were of little consequence. The early friendships developed have tended to exert a tremendous influence in this direction. Likewise the patent situation was and to some extent still is a valuable contributor in maintaining quality products as well as a contributing factor in maintaining the good-will established by the older concerns.

"But the competitive system as now developed and which has become so largely dependent upon the code and inspection is fast removing friendships from business, and since patents no longer control many of the staple articles, there is a downward tendency both in business methods and in product until absolute minimums are being reached.

Insurance Rates Not Decreased with Diminished Risk so Far as Electrical Installations Are Concerned

"To continue to recognize an independent commercial agency such as the insurance companies and to extend to them general policing powers which properly are the function of government, will not, in my judgment improve the present condition. Sooner or later the present policing powers of inspection and control of materials will be taken over by Federal, State or Municipal authorities, and a greater extension of powers in those hands under the present practice of label and inspection would precipitate a more critical condition."

"While it is generally supposed that the rate for any insurance is measurable by the risk and that the premium decreases as the risk decreases—we are confronted with the astonishing fact that fire insurance in respect to electrical installations is not founded upon this scientific principle. The principle of granting credits or discounts for better materials or workmanship is not recognized—hence there is no incentive on the part of the manufacturer, the wholesaler or the contractor to devote their energies toward higher standards. Each in turn, more and more, is being driven down to the minimum standard. To anyone familiar with the industry over a long period of time, there is apparent a gradual but more pronounced elimination of the various standards of quality both in product and workmanship.

"Admitting that the standards of today are superior to the standards of many years ago, my contention is that this is the natural development and experience of the industry, without regard to the Code or Underwriters' influences since we see evidences of increasing standards in every line of the industry wholly unrelated to the underwriters' mandates.

"In order to observe the effect that this practice is having upon the personnel of the industry, it is only necessary to consult any designer, engineer or salesman, and you will find they are of one mind—that there is no opportunity or incentive to create or sell products of superior merit. The answer is invariably—'We must get the price down.'"

If Insurance Premiums Were Based on Merits, Public Would Demand Quality Electrical Work

"It should be recognized that an undue amount of paternalism for the public does not always serve the public's own, best interest. In spite of all the effort which has been made to educate the public to a knowledge of electricity and a use of electrical products, with a clear understanding of the service function of proper installation, there is almost an utter ignorance or disregard of the importance of proper materials and installation.

"This I attribute to the fact that the public, by reason of the system which is operating, places its dependence for safety upon the label and the certificate. This dependence and general indifference will become more pronounced unless some change can be made in the present system which will reward the public for their interest in electrical things.

"If the system were properly operating and premiums on insurance were based upon the merits of the risk, the public demand would soon be for those products and that workmanship which would earn rewards on insurance premiums.

"If we analyze any other line of business endeavor, we cannot find a single condition parallel to that of the electrical industry. Almost every other business lends itself to the principle of the building of good-will. Even in the general construction of buildings and the insurance applied thereto, *the rate is based upon the risk—hence there is an incentive to employ materials and workmanship above the minimum requirements.*

"It should not be difficult to bring about modifications in present procedure which will preserve all the good qualities of minimum requirements and at the same time offer proper inducement for superior materials and workmanship. I believe this can be done in a very simple way—relating premium to risk—and at the same time preserve to the electrical industry its good will just as the Underwriters value their good will."

"Home Electric Legion" Takes Giant Strides in Three Short Months

WHEN we permit ourselves a momentary pause in our dynamic labors to glance about the orderly and spacious offices of the Home Electric Legion it hardly seems possible that three short months ago the great organization did not exist. On the first of March there was only the Terrible Situation—to wit, *thousands of electrical men living in non-electrical homes.* And ten days later we had executed the necessary *broad bold* strokes to bring forth our great organization to Cope with the Terrible Situation.

Today as we look at the rows of trim assistant secretaries, busily rejecting membership applications from countless electrical men who have not yet passed the crucial tests of the Order, we feel that progress is being made. Out of every ten thousand applications received, only one or two candidates are able to meet the stern specifications. And every time we get a new member our Situation-Coping power is multiplied.

Yet much remains to be done. The beneficent home-harmonizing power of the electric-driven, -heated and -lighted devices is being invoked but slightly. Where millions might be dwelling in watt-wrought happiness, scant dozens are now tasting the full blessings of electricity.

Impatience must be curbed. The work is going forward, and new names are constantly being inscribed with radium ink on the imperishable roster of the Order. Each scratch of each pen of each trim assistant secretary brings us nearer to the great day when it shall not be possible to find an electrical man who does not live in an electrical home.

Seven Essences from the Constitution of the "Home Electric Legion"

The Constitution shall have no preamble, nor any paragraphs beginning with "Whereas."

There shall be no dues or meetings.

The object of the Legion shall be to seek those electrical men who live in Homes Electric, and decorate 'em; and

To encourage, persuade, entice, urge, exhort, impel, incite, provoke, instigate, lure, and inveigle all other electrical men to make their houses into "Homes Electric"; and

As fast as these electrical men acquire "Homes Electric," to award them the Decoration of the Order.

The Decoration shall be made of hard-drawn platinum, studded with pure radium. Due to the hazardous nature of the manufacture and delivery of the Decorations, they will be awarded in absentia.

On Wednesday, April Fifth, at very high noon, in the presence of a crowd conservatively estimated at 500,000 persons, the radium-studded insignia of the Home Electric Legion was bestowed on Brother Walter Neumuller, secretary of the New York Edison Company, who is completing a new electrically-equipped home near Portchester, N. Y.

Having passed all of the exacting requirements for membership, the candidate was summoned before a record-breaking multitude and bravely submitted to the impressive ritual. Protected with specially designed mask and gloves against the destructive activity of the virgin radium in the emblem, the official Pinner-On warned the candidate to shield his eyes, and impinged the glittering insignia upon the breast of the latest electrical man to take the blessings of electricity into the sanctity of his home.

As the brilliant illumination from the badge flooded the massive auditorium, the Most Exalted Photographer snapped the shutter of his spirit camera. A wave of awe swept over the vast assembly—awe that smelled strangely of flashlight powder smoke. Men gripped the arms of their chairs tightly. Here and there women fainted. And away back in the last row center a little dog sneezed. Something of the grandeur of the scene is conveyed by the picture, reproduced just as the engraver received it.

Mr. Neumuller was tastefully attired in a spring office suit of grey tweed, with dark tie and sox. The Official Pinner-On was attired in a toasted-brown mixture, with anti-radium headgear and gloves. The Most Exalted Photographer wore seagreen trousers, and the conventional black focussing cloth, and carried a bunch of asphixiator matches, tied with henna ribbon.

Some Intimate Letters from Legionnaires

FLIPPING over the arches of our secret archives the other day we came upon a sheaf of letters from prominent Legionnaires. Intimate in the extreme, these epistles penned from the soul told what benefits the home-electric has wrought in domestic life. Perhaps, from the standpoint of fraternal ethics we err in laying these confidences before the lay gaze. Yet we feel that the public is entitled to know what electricity is doing to build home harmony. In the secret communications that follow we have omitted names and dates. Let the revelations speak for themselves.

Wife Used to Smoke; Now Doesn't Even Chew

A year ago my wife and I faced a crisis. We had come to the fork in the path, and the knife in the butter. My wife was smoking cigarettes!

"Lumenetta," I began, "you've got to give up cigarettes, or get along without a husband. The neighbors are beginning to talk about your smoking so much. And besides, you've used up all my Sunday cigarettes."

Lumenetta wept prettily.

"If you'd only investigate causes," she sobbed, "instead of just roaring about effects, it wouldn't be so bad."

And she went on to tell me that the smoking habit had been forced upon her through no fault of her own. Selma always made the toast over a coal fire. And it was always burned and smoky. And so my wife had gradually acquired the taste for burned smoke and had taken to puffing my Benzinas.

"They're toasted, you know," she added.

* * * *

Well, of course we installed a complete Home Electric. With the electric toaster tinting our toast a delicate sepia, the old taste for smoke and charcoal left Lumenetta completely. Today she is as free from the cigarette habit as a hen is from toothache. Once more our paths converge and harmony rules our home!

(Signed) ————.

She Blew an Egg to Atoms But Later Learned to Cook

I do hope you won't think I'm too familiar writing in to the grand high exalted officers of the Legion like this, but my husband is a member and I just wanted to tell you what perfectly ducky things electricity has done for us in our home.

It all came about through a simply terrible error of mine that almost shattered my social career. A neighbor of ours was giving an electric luncheon, with electrically percolated coffee, and electric waffles and electric toast and everything.

Well, at that time, John and I didn't have a *thing* electrical in our home except the lights. Can you *imagine* it?

And when my hostess parked an electric tea wagon in front of me, and told me to fix the eggs I was simply fussed to tears. There was an electric grill on the wagon, and a dish of eggs, and a little pan of water. I can't understand it, but I put one of the eggs on top of the grill and while I was wondering what to do with the little pan of water the egg exploded with a terrific concussion. I remember it omeletted a dear old lady sitting way over in one corner of the room in a Nile blue taffeta creation. She was terribly put out about it and I just went home and cried.

It was then that John and I decided to get all those electric things in our home and it has changed our whole life. Only last night my husband beamed at me and said:

"Rowena, you sure flop a mean waffle-iron!"

She Used to Burn a Lot of Gas —But Now "Makes Up" at Home!

Home Electric Legion gentlemen I ain't what you'd call a now member but I want to tell you what electricity done for me in the place where I work because the missus she had the bringaroundas bad and now she's practically over 'em, See.

Ten dozen times a day she would say to me On-ree my name is Henery see my old man's name was Henery and I'm named right after him but ever since the missus got this new limousine she calls me On-ree can you beat it you can't.

Well she'd say On-ree bringarounda car all the time and she'd go to git her hair permanent waved and git her complexion violet rayed one day and massaged the next day. But now her old man has put electricity in her now boo-door she waves her hair permanent and puts a electric wash and polish on her face and as the Bible says not even a lilly of the valley is violet arrayed like one of these. So she's getting over the bringaroundas the missus is and I don't have to take the car out so much and electricity in the home done it all.

Yours Henery McF———.

P. S. I enclose a pitcher taken of I and the new car.

Our Apologies, Brother Hutchisson!

Sometimes the refinements of method, those little ultra touches that we strive to put on a particularly excellent job, short-circuit and throw the whole job off the line.

Last month we were so tickled with the idea of listing Brother Harry Hutchisson of Cleveland among the honored charter members of the Home Electric Legion that we decided to do the job right. We had his name set up in a linotype slug, the metal of which was the same hard-drawn platinum that we use in the beautiful Decoration of the Order. After printing, of course, we planned to send the line of platinum type to Brother Hutchisson for a keepsake. Before the precious metal even reached the press-room it disappeared and has never been seen since.

This is our public apology for our carelessness in omitting from our Charter Membership List the owner of one of Cleveland's most representative electric homes.

Electrical Merchandising
The Monthly Magazine of the Electrical Trade

believes that:

ONE voltage, one frequency, and one kind of current should be made a universal standard for ordinary commercial and residence service in all communities as fast as existing systems permit, and that immediate steps be taken to agree on such a standard—possibly 110-volt, 60-cycle alternating current.

THE generating and distributing of electricity is the prime function of the central-station, and that no secondary activity should be engaged in that jeopardizes this main objective. The central-station, however, should recognize its responsibility in the development of the local market for energy-using appliances and should make its place of business headquarters for all appliances and a friendly, sympathetic pace-maker for all dealers in the intensive selling of electrical appliances.

(*For a complete statement of* ELECTRICAL MERCHANDISING'S *platform for the electrical industry for* 1922, *see February,* 1922, *pages* 52 *and* 53.)

Not as the Boarding-House Keeper Cuts Pie

WHEN a new victim came to our boarding house, the landlady took care of the increased demand by the simple expedient of cutting her pie into smaller pieces. Naturally, we looked on new boarders as undesirables who made inroads upon our chow.

That is the way most electrical dealers look upon the advent of a new competitor. With a certain amount of business to be divided, the dealer argues that the more divisions, the smaller each portion must be.

Which would be all right but for one thing: Merchants are the makers of their markets as well as the servers of it. If they want a larger piece, all that's required is for them to hustle up a larger pie.

Electrified Furniture, the Architect and More Outlets!

ENCOURAGEMENT for the "wired furniture" idea now comes from a new and unexpected quarter—the architect.

For years the electrical industry has been trying to educate architects as a class, in the desirability of plenty of convenience outlets and the importance of specifying such outlets liberally in homes built for their clients. So far the response has been a bit meager, but the reason for this, as it now turns out, is that the architect has never quite grasped the appliance idea or understood the desirability of being able to connect up lamps or labor-saving devices anywhere at will.

But present to him the "electrified furniture" idea and point out to him its future possibilities, and immediately a great light breaks over his artistic soul. "Appliance contraptions" he did not understand, but "wired furniture" his gentle spirit envelopes at once.

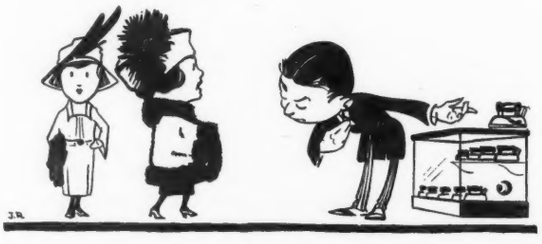
"Hmm," he observes, "very interesting—very! We'll have to get plenty of—hm—'convenience outlets,' do you call them?—in Mrs. Stuyvesant's new house. H'mm."

Electrified furniture, electric player-pianos, electric phonographs, portable lamps, and so on are all arguments to be employed when selling the "convenience outlet" idea to the architect.

How the Electrical Dealer Widens the Radio Market

WITH radio equipment on display, and often with a station set up in working order, the electric shop is lining up dozens of new wireless apparatus consumers every day. People who have always considered radio communication as a highly technical branch of science are learning that by putting a simple receiver to their ears and twisting a perfectly understandable knob they can listen to voices and instruments hundreds of miles away.

The thing takes hold of the imagination, and discriminating salesmanship soon capitalizes on the newly awakened interest and makes a sale. Thus an ordinary citizen is converted into a customer for aerials, detectors and ground clamps and the radio market is widened to the extent of a new amateur station. The manufacturer who sells direct to the public can sell to a group of ready-made radio enthusiasts. But his path to broader fields runs straight down the middle aisle of the hustling electric shop, where new business is being built up daily.



Preaching the Gospel versus Peddling Bibles

A GREAT deal is being done to educate salesmen, but mighty little to convince salesmen of the practical value of education. Knowledge in homeopathic and sugar coated doses is made available, but no salt of bitterness to create a thirst for knowledge. Which raises the question, have we not gone crabwise at this problem of training electrical appliance salesmen?

In the furniture trade it recently happened that a customer purchased an equipment represented as solid mahogany which turned out to be painted pine or thereabouts, with the result that the dealer was hailed to court and some $1,500 recovered. The incident was seized upon by furniture men everywhere as a warning to ignorant and indifferent salesmen. Although, as *Good Furniture* says, "to the average retail furniture salesman, any piece of furniture finished in a reddish color looks like mahogany," the fear of legal consequences has induced some at least of them to submit their brains to a little elementary training.

Is there not a hint in this for the electrical trade? Perhaps we too can show our salesmen the dangers of ignorance and the rewards of knowledge so vividly that they will actually *want* to know something about this billion-dollar business we are engaged in.

Plant the Seeds of Future Sales

"MADAME, can I interest you in an electric cleaner?"

"We have a cleaner."

"Thank you," says the salesman.

Slam! says the door.

Because the woman has a cleaner, the salesman takes it for granted that he cannot make a sale. Maybe he can't, this year, but if he's wise he will plant a seed that may grow to bear a sale next year. The woman who owns a cleaner is the surest prospect for another.

A few years ago the city of Denver was pointed to as a freak community. It had exceeded the mythical "saturation point" on electric irons. More irons were known to have been sold in Denver than there were electric meters to be spun by the current they consumed.

Today we know that there is no more a saturation point for flatirons than there is for baby carriages or coffins. And equally there is no saturation point for cleaners or washers or flivvers or anything else that runs, gives satisfaction, wears out and is replaced by a new and better device.

So instead of saying, "Thank you" and backing off the front steps when a woman says she has a cleaner, we advise the appliance salesman to ask, "How old is the cleaner you own?" and put the answer down in his little book.

How Much of the Washing-Machine Business Are You Getting?

IN YOUR city or town there are probably four classes of stores selling electric clothes washing machines. Electrical dealers, and central station companies selling appliances form one class, hardware dealers the second, and in the third group are the department stores, while the fourth class is composed of miscellaneous stores handling washers.

Eighteen of the largest manufacturers of washing machines have told us what percentages of the washers they make are sold through these four classes of stores. The electrical stores in the average community sell 65 per cent of the washers used, while the hardware dealers come second, selling 16.6 per cent of the washers bought. The remaining 18.3 per cent is split up between the department stores and miscellaneous outlets, 8.9 per cent being the share of the department stores and 9.4 per cent being sold through the miscellaneous stores.

"Luminaire" Suggested for "Movable Fixtures"

Editor ELECTRICAL MERCHANDISING:

The coming into vogue of appliances which can be removed from place to place and to which the misnomer "movable fixtures" has been attached has brought the matter of nomenclature particularly to the attention of lighting people. The Illuminating Engineering Society referred the consideration of this question to its committee on nomenclature and standards with the suggestion that a term be recommended. Requests for suggestions of suitable terms were sent out to the membership of the Society and a considerable number of such suggestions were received. It was found, however, that most of the terms suggested were manufactured or coined words which had no legitimate ancestry and were therefore objectionable. Among the terms proposed, however, was one which met with the approval of the committee, namely the word "luminaire." This word is used in this connection in the French language. Its construction and ancestry are such that in can be adopted into the English language as readily as "garage," "hangar," etc., which have recently been taken in. The significance of the word is evident on the face of it. It is believed that this word could and should be introduced into the English language and that it would be a distinct advantage so to do.

The Council of the Illuminating Engineering Society at the March meeting formally approved and adopted the use of the word "luminaire."

Very truly yours,

CLARENCE L. LAW,
General Secretary.

Illuminating Engineering Society,
New York City.

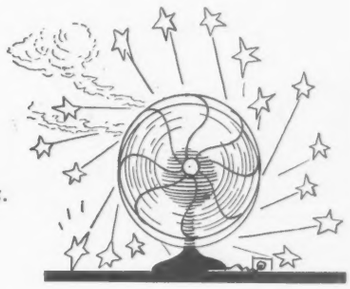
"The Home Electric"

—as the Underwriters Seem to See It!

The floor lamp flirts with flame and fire,
Because its juice comes through a wire.
The only safety floor lamp made
Is built with an asbestos shade.

The toaster is a thing to dread!
When browning high explosive bread
A man should dress in armor plate—
And even then the risk is great.

Beware the dread electric fan!
Its sparking might cremate a man
We feel "incendiary" is
The word that best describes its whizz.



Electric cleaners should be banned.
Think how the things would burn your hand
If sparks should light their gathered dust
And cause their flaming bag to bust!

Marketing New Lines at a Profit

The Dealer Who Makes Money Is the Man Who Capitalizes New Developments of the Electrical Art in Terms of Consumer Sales

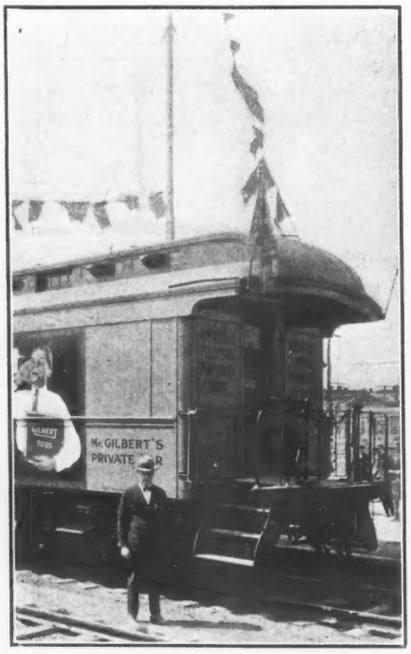
Stimulating Appliance Sales by Featuring Economies of New Central Station Rate

A reduced rate for domestic electric service was recently established by the Hartford (Conn.) Electric Light Company. A feature of this rate is an energy charge of 6 cents per kilowatt-hour, following a flat rate based on the area of the rooms supplied. Compared with the former energy charge of 10 cents per kilowatt-hour, the new rate makes the use of appliances much cheaper for the consumer, and to drive home this point a window exhibit was arranged by the company.

Centrally located was a chart showing in diagram form the old and new hourly costs of operating various appliances in common use, the "spread" between the rate lines serving as an area of economy resulting from the new rates. The tabulated hourly saving secured on different appliances was featured at the left-hand side of the chart, and at the right was shown the use period without adding to the former bill of several appliances. The saving secured was also shown by placards near typical appliances in the window front.

Thus, it was shown that with the new rate, the average monthly cost of running an electric iron is 39 cents against the old average of 66 cents, and this means that besides running the iron the customer, on the new rate without increasing his bill, can use a heating pad for five hours, make six slices of toast every morning for a month and do the washing. G. P. Luscomb is manager of the appliance department.

A. C. Gilbert and His Traveling Show of Electrical Toys



Here's Alfred C. Gilbert of New Haven, Conn., who is sending the special car shown, on a tour of the country to cooperate with local dealers and exhibit electrical toys to the general public in towns and cities which the car will visit. The car contains a complete display of A. C. Gilbert Company products, toys, experimental sets, motor parts, and Polar Cub electrical devices, fans, etc., and as shown, is also equipped with a radiophone outfit for receiving daily radio concerts. The car is now in New England and New York State, and has been averaging from 2,000 to 2,500 visitors daily.

Flashlights—the Most Widely Used Electrical Appliance

It is estimated that there are more than ten million flashlights owned or in daily use in the United States—or, in other words, one person in every ten owns or uses an electric flashlight. More than five million flashlights are sold each year, and more than twenty-five million batteries are required annually to take care of the flashlights already in use.

"The total value of the sales of flashlights and flashlight batteries amounted last year to more than $20,000,000; according to E. H. Mathews, of the American Eveready Works, in an address before the New York Section of the Illuminating Engineering Society. "This enormous volume is achieved on a product selling at the average retail list price of $1.50 to $2, and from 35 cents to 50 cents for the battery."

"During the twenty years that have elapsed since the first flashlight was produced," continued Mr. Mathews, "there have been more than 580 patents allowed covering flashlights, hand lamps, and combinations involving flashlights. Thousands of uses have been discovered, all within the three broad groups of utility, convenience and protection."

"While the flashlight is a lighting agent which is used for any number of different purposes and under a great variety of conditions, it should never be forgotten that as a light to be used in an emergency it has no other illuminating competitor. There is a big field for emergency work. The flashlight will take its place with the fire extinguisher as standard emergency equipment on steamers, railroad trains, theatres, hotels and for all public buildings."

Hearings on 660-Watt Rule at New York, May 19

More than thirty delegates from various national and local organizations appeared at the Chicago public hearing on the 660-watt rule, April 18. Many suggestions were offered, the majority of which assumed recognition by the electrical committee of of the N. F. P. A. of a general demand for a change in the National Electrical Code rule, 23d, permitting a greater current load on the ultimate branch lighting circuit.

A second hearing will be held in New York City on Friday, May 19, beginning at 10 a.m. in the assembly rooms of the New York Board of Fire Underwriters, 123 William St.

Watch the Man Who Sneers at Accounting

Now, as to accounting, it does the credit man's house no good for him to look into honest eyes and believe honest words if the dealer doesn't know his affairs, what he owes, what he owns and his expenses. If he's honest, that's fine; but if he's honest and knows his condition, that's better. Watch the man who sneers at accounts, data and records. Even if he's honest, he will lose out.

—*The Mailbag.*

Issues Diary for Radio Fans

A combination diary and radio instruction manual will be published shortly by William W. Ayer & Company, Montclair, N. J., manufacturers of the "Home Electric Game." Space will be provided for notes on concerts, lectures and messages received, so that the amateur operator may keep a log of his receiving sessions from day to day. Space for one year's notes is provided.

Sells Socket Extensions Through Radio Amateurs

A plan that helps radio amateurs to finance the purchase of the additional equipment that every youthful operator longs for has been worked out by the Coto-Coil Company, 87 Willard Avenue, Providence, R. I. In distributing its socket extensions, this firm makes a standard proposition to the electrical dealer.

The dealer in turn selects several of his livest radio amateurs and appoints them his sales agents for the socket extensions. Boys who want to buy high-class radio apparatus, but who have not the funds available, are thus enabled by house-to-house selling to provide themselves with the necessary cash. And the dealer is thus able to make a profit on the extensions and, in addition, move more radio equipment.

The plan was recently tested out in Providence when a number of men who had never had any selling experience were sent out. Despite the fact that none of these men had ever sold a nickel's worth of merchandise before, the records showed that sales were made in 60 per cent of the cases on the first call!

Sell a Toaster to Every Optician in Town!

By J. H. LEHMAN

The ordinary electric toaster, the kind we use every morning at the breakfast table, has been put to novel use as part of the equipment of a prominent optician of Columbus, Ohio. At each of the fitting tables of this optician's establishment is a toaster, which is used to heat the frames of tortoise-shell glasses, so that the glasses can be bent to the required position for proper fitting at the wearers' temples. The optician says that he looked around for a long time to find a satisfactory heating arrangement until he hit upon the electric toaster.

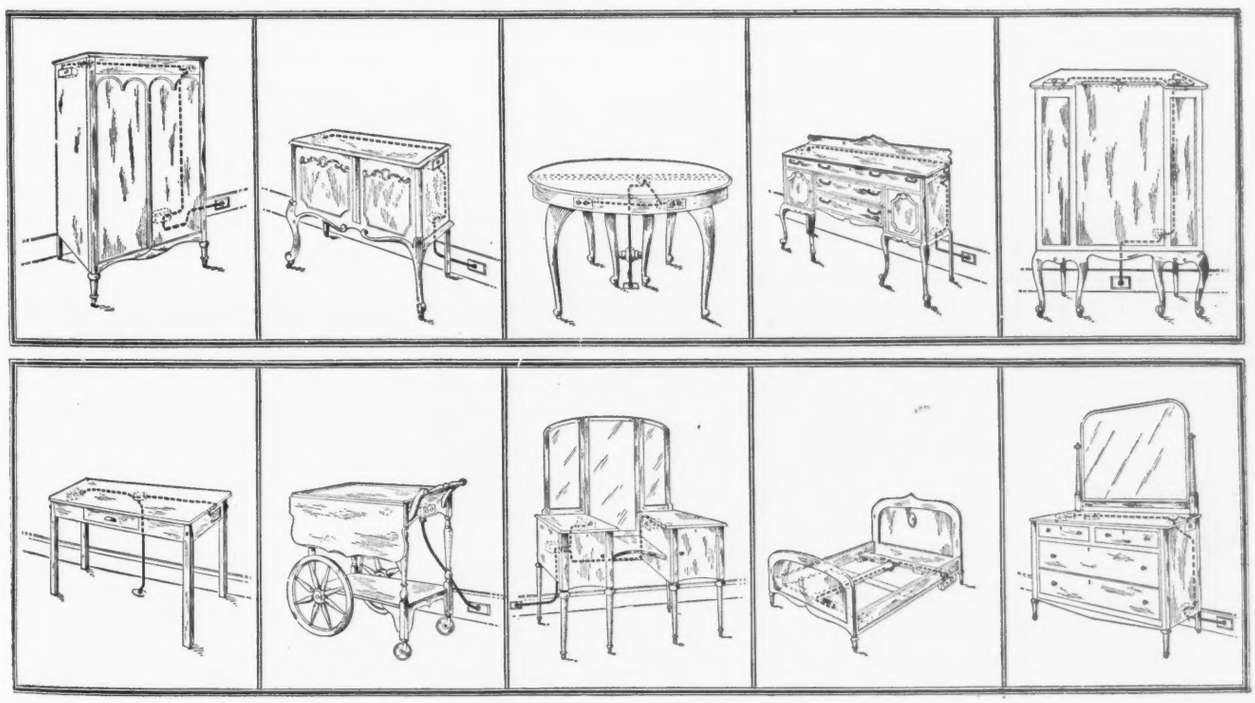
Electric Toaster Keeps Tree Warm

The cold snap late last spring made the lot of the suburbanite a not wholly happy one. His pet fruit trees, for instance, have been in great danger of frost bite.

But Norman Macbeth, who contributes the monthly compilation of fixture design patents to ELECTRICAL MERCHANDISING, is one suburbanite who has solved the problem. Directly in front of his dining room window was a prize peach tree, all in blossom. To protect it from the cold the electric toaster was attached to a long wire and placed on the ground under the young branches. The plug was attached to the usual fixture in the dining room, the wire going through the window, which had been opened just a crack.

And the toaster, operating through the night, saved the tree!

"Electrified Furniture" — Some Suggestions for Installing Cable and Outlets



Here are some plans for electrically equipping furniture as worked out by the N. E. L. A.'s committee on electrified furniture of which Joseph C. Becker of the United Electric Light and Power Company is chairman. The sketches show the actual arrangement of armored conductors and outlets as installed in the suite equipped by the committee and exhibited under its auspices at the last New York Electrical Show. Several furniture manufacturers have since brought out similar sample suites to test out the idea, but it is suggested that contractors can themselves wire existing pieces of customers' furniture, bringing to owners of valuable pieces all the conveniences of electrical outlets installed in their present furniture and equipment.

Ideas for the Man Who Sells

Plans, Schemes and Methods Gathered from Successful Selling Experience to Increase the Sale of Electrical Appliances

Horse and Wagon Take Electric Shop to Salt Lake "Market Behind the Door!"

Realizing that the public has to be "gone after," the Edison Electric Appliance Company of Salt Lake City has conceived the idea of taking the store right out to the consumer's home, and are using it to good advantage.

They have secured a fair-sized dray drawn by one horse. On either side of the dray canvas signs have been posted which read: "The Hotpoint Store Brought to Your Door." The wagon is in charge of two solicitors, one for each side of the street, and is driven by a boy. It carries samples of each of the lamp socket appliances, such as grills, irons, vacuum cleaners and other popular appliances.

Actual Demonstrations on Customers' Kitchens

The solicitors go from house to house. When one makes his call and finds that the prospect already has an electric iron, he immediately returns to the wagon and secures some other appliance in which he believes she might be interested. In this way he has an opportunity to demonstrate right in a consumer's home the advantages of the grill or other appliance. In many cases he prepares lunch on a grill and the firm sold many of these appliances the first week the campaign was under way.

The firm has also found that the wagon with its large signs is a good advertising feature. Drawn by a horse, it moves slowly up the block within plain sight of every one. Many house-wives have come from their homes to the street to question the solicitors even before they have called on them.

A Seed that Grew Into the Sale of 24 Ranges

BY P. H. WERTZ

Four days' work three years ago has resulted in the sale of twenty-five electric ranges and a quantity of smaller electric apparatus by the Warren J. Green company of Watertown, N. Y.

One of the salesmen loaded a large range and some other apparatus into a truck and, with his wife, drove to Brasher Falls, St. Lawrence county, 30 miles away. A vacant store was rented and an electric kitchen set up. Transportation and getting ready occupied one day. The second was devoted to demonstrations, the wife of the salesman showing the women how cookies could be baked and other foods cooked. The third day a similar exhibition was given in Winthrop, a neighboring village. The demonstration range and most of the other electrical implements were disposed of at once. The fourth day was taken up with the return trip.

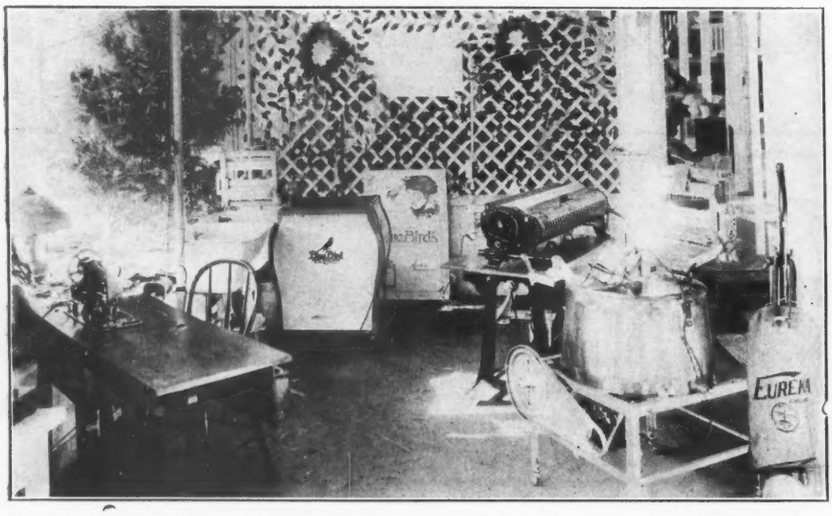
Since that time this company has placed twenty-four more ranges in the towns, to say nothing of many smaller sales. The secretary of the company calls it the best single stroke of business ever pulled by his concern.

Tag the Door-Handles of Parked Autos

Here's a scheme that will help you remind all motorists in your territory that you sell electrical goods. Get your printer to run off for you a few hundred cards like the one illustrated, with a slot cut out just above the center. Then give some ambitious school boys the job of slipping these cards over the door handles of all the cars parked in your neighborhood. Care should be taken to use stock that is flexible enough for the purpose. Good effects can be obtained with two colors on cards of this type.

While You're Out in the Car—
Drive over to the
JONES ELECTRIC SHOP
25 Main Street
and get those lamps and attachment cords you've been wanting. You'll see a fascinating family of electric home appliances.

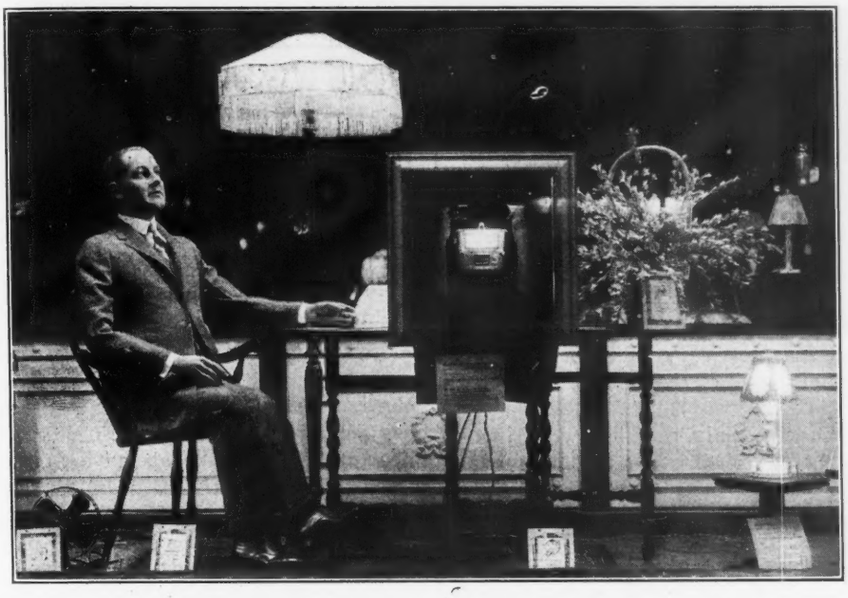
Why Not an Electric Appliance Display in Your Public Market?



The Valley Electric Supply Company of Fresno, Cal., obtained space in the front of the recently completed free market in that city and there it maintains a complete electrical display. People passing the windows, which are also decorated, are attracted inside and given a demonstration of the appliances in which they are interested. It has been found that not only are lists of prospective buyers obtained but also the actual sales from this booth are sufficient to justify its maintenance.

An extra outlet or two installed on the porch will be found useful for attaching the electric fan or portable lamp—QUALITY ELECTRICAL WORK!

Put Your Community on Speaking Terms with the Meter By a Demonstration Like This!



To take the mystery out of the meter box, a novel meter-reading contest which attracted wide attention was recently held by the Harrisburg (Pa.) Light & Power Company. Prizes were given to those who read the meter correctly the greatest number of times during twelve days. As the picture shows the meter was placed in a shadow in the window, next to the dapper wax figure holding the rules of the contest in its hand. The meter was of special design, having very weak magnets which allowed the disk to run 200 r.p.m., and having a clock taken from a 150-amp. meter, which caused the meter to register 4,420 kw. hr. in twelve nights, or 368.4 kw.-hr. a night. A time switch closed the circuit of two 100-watt lamps at midnight, and opened it at 5 a.m., allowing the readings to be taken over a period of nineteen hours. To avoid disputes, four expert meter readers read the meter and marked dial cards each day, thus giving a judicial check on the interpretations of the amateurs.

Let the Neighbors Know About Every Home Demonstration

BY BERNARD G. PRIESTLEY

Here's a tale of how a single demonstration in a woman prospect's home resulted in four subsequent sales of washing machines to four neighbors. It is told by a salesman in a Lynn, Mass., store.

Skeptical, but Game for Demonstration

A young woman came in one day and announced, not without a touch of sarcasm, that if washing machines did the things claimed of them they were indeed wonderful devices. As the salesman engaged her in conversation, she became most authoritative in her assertions and boldly announced that she did not believe washing machines would do half the things that were claimed for them. If they did, she added, she would discharge a very independent washwoman whose impertinence had been agitating her for months, buy a machine and proceed to do her own washing.

"Let me ask you a question," countered the salesman. "Are you open to conviction?" The woman nodded in the affirmative.

"I'll come out to your house and do a washing for you," said the salesman. "Before I get through you'll want to buy one of our machines."

The woman laughed. "Go to it!" said she. "But you're not going to sell me a washing machine."

Arriving at the house with a washing machine, the salesman found the woman prepared to give the appliance a double test—or to weigh the patience of the salesman. She had gathered all the soiled clothes she could find in her own household and in her mother's home near by for the salesman to practice on.

Calls Neighbors to View Man-Washed Clothes

The salesman went at the task good naturedly. He had both washings completed and out on the line before the daughter and mother recovered from their surprise at the speed and efficiency of the machine. Nor were the women satisfied to keep the results of the demonstration to themselves. They insisted on having a group of their neighbors step in and view the machine and see the completed washing on the line—done, from start to finish, by a man. The daughter gave the salesman an order for the machine, and sales of four machines to neighbors were traced back directly to this one demonstration.

Keep Your Used Street-Car Cards Working

The Crawley Electric Company of Peoria, Ill., with a branch store at Henry, Ill., knows how to get full value from advertising helps that are furnished by manufacturers. This firm believes strongly in street car advertising and has a contract with the local traction company, which calls for a display of seventy-eight cards each month.

The cards in the cars are changed every month. However, instead of throwing away the cards, which are still in good condition at the end of the month, the Crawley Electric Company uses them in posting the roads leading into Peoria. The cards are well printed and durable and quite a display has been built up on some of the roads.

"Typewritten" Ads Give the Personal Touch

Notice the new Lighting Fixtures we have installed for the Midwest Reserve Trust, 10th and Walnut.

"Commercial and Industrial Lighting"

Satterlee

When you need fuses, sockets, wire or Mazda Lamps telephone us. Conservative prices and prompt deliveries. Phone us for your Electrical Supplies.

Satterlee ELECTRIC COMPANY 22 East Ninth

You are assured of maximum life and brilliancy when you buy Westinghouse Mazda Lamps. They cost no more than other kinds.

Satterlee ELECTRIC COMPANY 22 East Ninth

"Something different" from the ordinary type of small-space advertisements are the weekly *typewritten* ads of the Satterlee Electric Company, Kansas City, Mo. These ads, though small-space, convey the impression that the dealer casually sits down and dashes off each one as a personal message to the reader. The personal touch is the biggest factor in their pulling power, but besides that they appear regularly every week and contain a bit of lighting information always interesting and new.

The Appliance Saleswoman

An "Idea Exchange" for the Women Who Sell Labor-Saving Appliances for the Home

"A Cleaning Closet for Every Home"— and Daily Housecleaning

Miss Jean Krueger of the home economics department, Wisconsin University, Madison, Wis., has made plans for a 1922 publicity campaign to cover the entire state, for efficiency in the home. Miss Krueger will advocate the use of modern electrical appliances and fixtures in homes, and points out the large and growing percentage of homes in villages and rural communities which now have electrical service, making the use of modern appliances possible.

She will advocate "a cleaning closet for every home," where appliances may be kept in good condition when not in use. She will also advocate daily housecleaning, as against the old practice of occasional upsetting of the home, and will show how the daily housecleaning is an efficient proposition with the use of electricity.

Promoting Electrical Goods at Reception by Girls

BY ROBERT S. MERRILL

Would you mind lending part of your electrical goods stock to one of your girl clerks so that she could take it to a party? She wants to make it plain that her work in selling electrical goods is something to be a bit proud of and wants the guests to see with their own eyes just what she handles. Such a party was a success with girls from electrical goods factories; it ought to work out with girls employed by electrical dealers.

When the Industrial Service Center of the Young Women's Christian Association of Chicago recently held "open house" there was no lack of contact between the girl members who work for the Benjamin Electric Company and the Jefferson Electric Company and the club women who were guests. These girls had something they knew would interest almost any woman and they could talk about them, for they helped make them. The girls from the Jefferson company showed toy motors and a toy washing machine. The girls from the Benjamin company displayed some lamps, two-way sockets and an enameled metal table and chairs. Although the girls explained the manufacture and points of these products no attempt at out-and-out selling or advertising was made. This idea originated with the Industrial Service Center of the Y. W. C. A., but is easily adaptable to any organization of working girls in connection with a public gathering.

Besides the electrical merchandise there were exhibited, by the girls from the factories where they were made, such things as addressing machines, corsets, gloves, mittens, candy, inks, paste, show-card colors, sport coats, and other garments.

What the Woman Wants to Know About Ironing

It is true that, with the ironing machine, the fundamental questions in the woman's mind are: "Will it cost much?" "Will it really save labor?" "Is it safe to operate?" But often a totally different kind of question gets uppermost in her mind, which the salesman must find out and be prepared to answer. For example, she may be asking herself, "Doesn't it flatten the heavy embroidered pieces too much?" or, "How can I press my 52-in. luncheon cloth on it without creasing?" Often it's the *unspoken question* that must be answered before a sale is made.

When Your Woman Prospect Becomes Suspicious

He was a hustler, this salesman, but he had just sold two suction sweepers, so he felt entitled to lounge comfortably against—well, the soda fountain bar—and wax communicative on some of his experiences, and expand just a little on the philosphy of his calling.

"Gee, it's embarrassing," says he, "when you unload a ton of dirt or so from some of these ladies' rugs, though it does give you some satisfaction. But there she's sworn herself blue in the face that there's no dirt in her carpet—considers it a personal insult that you should suggest it—and the rug certainly does look clean and the house neat as a pin. And then she lets you demonstrate. And the carpet takes on a new color, and you empty your bag of a load of dirt that makes her so ashamed and red in the face that—give you my word—I have to apologize for doing it!

"The worst kind, though, is the kind that becomes suspicious, and says you had the dirt in the bag all

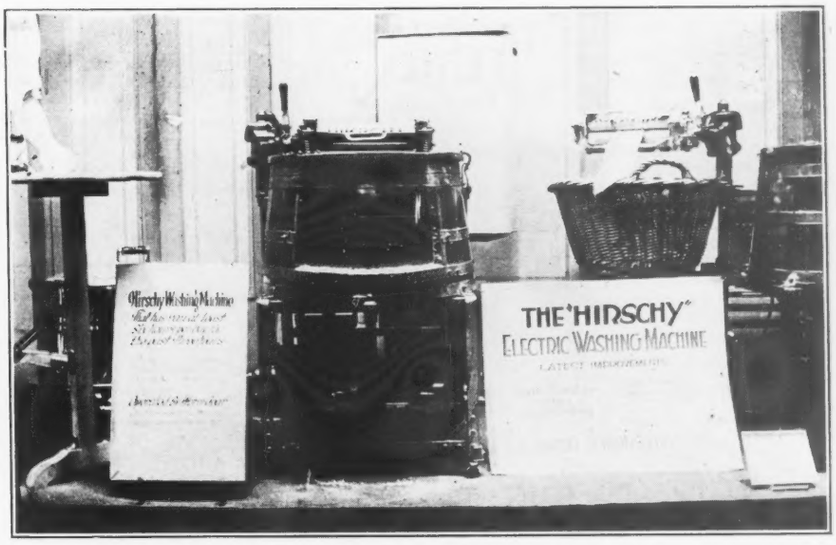
the time! Simply won't believe it all came out of her carpet. But that doesn't happen to me any more, because now I empty the bag before I start the demonstration, show her how it's made, to prove to her that it's empty.

No More Free Cleanings—Do Only Half a Rug at a Time

"Gee, women are funny. You wouldn't believe how many there are who ask for a home demonstration, just to have a free cleaning. Some of 'em call up a different dealer or company every month for a demonstration and have a free cleaning every month—until they can't work it any more.

"They can't work that all the time with me, now. I never leave a sweeper with them over night any more. And in giving a home demonstration, I clean only half of a rug—leave the other half for her to think about. If she can clean it as well as my half, well and good—but nine times out of ten she can't.

"The husbands are mighty useful sometimes, too. I just sold a cleaner to a woman because her husband butted in at the right moment. She wanted a "baby" cleaner—thought the big one cost too much and besides was too heavy. Friend hubby, who had been listening, now spoke up and gave it as his opinion that the difference in price was much less than the difference in advantages of the two sweepers—and if the machine was too heavy, he would carry it up and down stairs himself. So the sweeper was sold, and that woman is more pleased with it every time she uses it."



"This electric washing machine has run at least six hours a day for the last three years," reads the card in the window. "This equals more than thirty-four years of actual washing use—at a cost of less than 2 cents an hour."

Will the Machine Last?

BY WILLIAM BLISS STODDARD

A very practical demonstration of the efficacy of the electric washer was arranged by Donaldson's, Minneapolis, Minn., which answered in a most convincing manner the query: "But will it wear?" They showed in the middle of their large window a sturdy electric machine churning the suds in a very business-like manner. Near it was a card:

This electric washing machine has run at least six hours a day for the past three years. This equals more than thirty-four years of actual washing use, at a cost of less than 2 cents an hour.

At one side was shown an ironing board, with a figure in blue morning dress using an electric iron, while behind it was a rack of freshly ironed cloths. Attached to the front of the ironing board was a card:

YOU CAN IRON IN COMFORT IF YOU USE AN ELECTRIC FLAT IRON

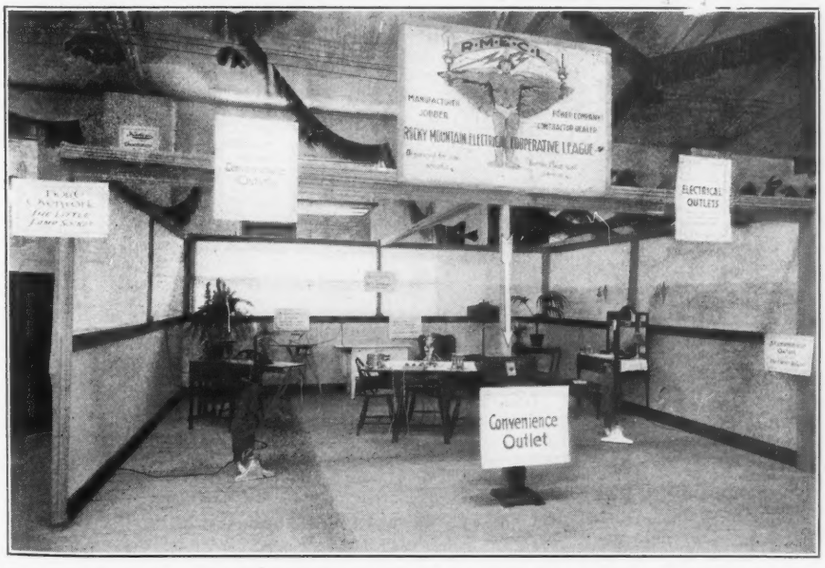
Just the thing for pressing out ribbons and handkerchiefs and smoothing out the wrinkles in lingerie waists. No walking from stove to ironing board—and the iron maintains an even heat. No iron holder needed, for the handle is always cool.

Just prior to the summer vacation period the company sent to a selected list the following note:

GOING AWAY?

Have you seen our small electric pressing irons? Just the thing for your room or when staying at a hotel. Enables you to keep fresh and clean at a very small expense. Irons handkerchiefs, neckpieces, ribbons, lingerie blouses beautifully, and makes you independent of exorbitant laundry charges.

Showing the Little "Convenience Outlet" to Salt Lake's Housewives



If any of Salt Lake City's housewives had only the vaguest notions of "convenience outlets" before they visited the "Electric Cooking School" held there recently, their ideas must have cleared up by this particular booth, belonging to the Rocky Mountain Electrical Cooperative League. Every conceivable use for a "convenience outlet" was shown, and snappy cards drove home pointed observations. The cooking school was held in Salt Lake's Auditorium, lasted two weeks, and attracted thousands of women to its lectures on electric cookery, its contests, and its exhibits of electrical appliances. Electrical dealers and manufacturers, and foodstuff concerns, had exhibits, and the "Deseret News" cooperated by running a "Cooking School Section" and giving extensive publicity. Salt Lake has since had a Home Electrical.

Hints for the Contractor

Ideas on Estimating, Stock Keeping, Shop and Construction Methods, Repairs and Maintenance, and Collections

Some Relations Between Circuits, Floor Area, and Number of Outlets

In Chicago and a number of other places there is a requirement that residences shall be wired on the basis of so many watts per foot. There is, however, considerable misunderstanding from time to time as to what is meant by the watts in this requirement, comments R. S. Hale in his report as chairman of the Wiring Committee of the N. E. L. A.

Usually, the watts per square foot are on the basis that each circuit of wiring carries, say, 660 watts. It is, however, well understood that the nominal connected load to a circuit may be considerably less than this, or in some cases may be more, and also that the actual load carried on a circuit protected by a 10-ampere fuse may often be more, and often is more, than 660 watts.

It, therefore, becomes clear that the actual intent of the rule which says ¾ of a watt per square foot, when coupled with the idea that a circuit is 660 watts, can be better expressed by saying that there shall be at least one circuit for each 880 sq.ft. This avoids any ambiguity.

880 Sq. Ft. per Circuit

The advantage in laying out wiring on some such basis is very clear since if the circuits are laid out so that no circuit is called on to supply more than, say, 880 sq.ft. of area, then in practice this will allow for later additions of convenience outlets at various points. On the other hand, if a circuit is laid out to cover much more area than this, or perhaps it would be better to say, if a circuit is laid out to cover too great an area, then as the use of electricity increases and the customer desires to have more outlets and to use more lights and appliances at the same time, he soon finds that in order to carry the load it will be necessary for him to wire up additional circuits, something which is very much more expensive than to add outlets to existing circuits.

A figure now used in a number of cases is 880 sq.ft. per circuit. In some particular kinds of houses or businesses it may be too great and a figure of perhaps 600 sq.ft. per circuit, which would correspond under the old terminology to one watt per sq.ft. may be better. In some business places, a still higher use of electricity may be indicated, that is, a less number of hundreds of square feet per circuit. Likewise, in some rooms and places which are used for such purposes that the demand for light and for convenience use of electricity will never be very great, it may be good practice even at the start to arrange the circuits to supply a much greater area for each.

In view of the uncertainty as to what figure of number of square feet of floor area per circuit should be recommended by the committee for different conditions, it is suggested that all members of the N. E. L. A. and others interested should check up their own houses and offices to see what number of circuits they have in proportion to the area and to see whether this gives a satisfactory layout or whether they could, and practically have, gotten along satisfactorily with a less number of circuits or whether they really need more.

The above discussion refers to the present standard circuit limited to sixteen outlets and protected by a 10-ampere fuse. The special 1,320-watt circuit of No. 14 wire throughout to which thirty-two outlets may be connected, can, if used at all wisely be used to cover a larger area than the ordinary circuit.

The Number of Outlets Needed

A close parallel and yet distinctly different question is the number of outlets that are needed.

Of course in every room at least one outlet is needed for illumination, whether this be a ceiling outlet, a bracket outlet, or a wall receptacle into which a floor lamp or table lamp can be connected.

As one outlet will always be needed for illumination, it is clear that in every room there should be provided at least one additional outlet and we say this although we realize that a very high percentage of the rooms now wired in both cities and towns have only one single outlet provided.

However, it would seem as though two outlets to a room should be the absolute minimum. For rooms of large size, say over 200 sq.ft. in area, it is probable that more than two outlets should be provided, and it is suggested that a basis of one outlet for each 100 sq.ft. of area or fraction might be considered as a reasonable standard with two outlets as a minimum even in a small room. (This from some points of view is a low number.)

For instance, in even a small living room, there should probably be

Electricity Takes the Lameness Out of Lifting

A few years ago a great advertising man, walking down the street, noticed a man hoisting a can of ashes out of a cellar. The next day newspaper readers were greeted with an advertisement entitled "Do You Get Up With a Lame Back?" Assuming an affirmative answer, the copy suggested the use of Somebody's Sea-Green Pellets as a curative. An electrical inventor, however, has gone to the heart of the matter and built an electric hoist to do the lifting. The illustration shows how the electric "Liftabout," as manufactured by the Shepard Electric Crane & Hoist Company, Montour Falls, New York, lets the operator stand up straight. Electric pullers of this sort which never get up with lame backs are not only adapted to ash handling. They are all-around muscle savers.

provided at least two convenience outlets, one of which would be used for the percolator and the other for the toaster, and in addition a third outlet is needed for illumination.

A Minimum of Two Outlets per Room

On the other hand, a minimum of two outlets per room and a provision for an additional outlet for each 100 sq.ft. over 200 will, in the average house or apartment, increase the number of outlets so much that it seems unwise to ask for more than this until the general existing average has been raised considerably.

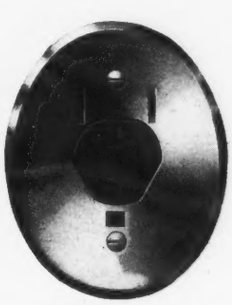
In respect to this, as in respect to the number of square feet of floor area per circuit, the committee is not as yet ready to make any formal recommendation, but again suggests to the members of the N. E. L. A. and to others interested, that they should check up their own houses and offices to see how many outlets per room are provided and whether the number gives them a reasonable number of convenience outlets or whether they are going to have more outlets put in as soon as they can arrange for the expense. This will very likely lead to a classification of rooms.

How to Install Elexit Devices —Wall Type

BY E. CANTELO WHITE

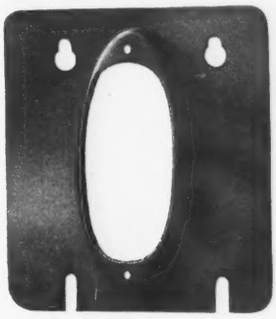
Eleven leading wiring-device manufacturers have now commenced shipment of Elexit devices. As these are all carefully standardized so that they may be used interchangeably, the following information applies equally to all, including the catalogue numbers.

No. LX-101 Wall Receptacle



No. LX-301 Finishing Plate

Oval wall receptacles. Elexit wall receptacles must always be installed flush. LX-101 receptacle consists of steel supporting plate with electrical receptacle attached. These two parts do not come separately. The steel supporting plate has holes placed to permit of installation under various standard outlet-box conditions. The electrical receptable has double-T



No. 52C63 Box Cover

slots and will accommodate the parallel-blade cap of standard attachment plugs, as well as any Elexit plug for wall brackets. Connect outlet wires to the binding screws of the receptacle. The steel supporting plate which takes the whole strain of supporting any wall bracket fitted with an Elexit plug, is then securely attached to the outlet by any of the following means:

No. 54C63 Box Cover

On 3¼-in., Outlet boxes. Standard boxes of this size are either round or octagon, are 1½ in. deep and have two tapped lugs spaced 2¾ in. on centers diagonally. Attach LX-101 receptacle directly to the lugs with No. 8-32 screws furnished with receptacle.

On 3¼-in., Outlet box with stud. If end of the ⅜ in., fixture stud is ⅝ in. or more back of wall, screw LX-151 wall stirrup on to the stud so that tapped holes in stirrup are horizontal. Then attach steel supporting plate to stirrup with No. 8-32 screws furnished with receptacle.

On 4 in. Outlet boxes with box covers. If box cover has tapped lugs spaced 3⅜ in., on centers vertically, or spaced 2¾ in., on centers diagonally, attach steel supporting plate directly to lugs with screws furnished with receptacle. If box cover has no lugs, attach to fixture stud using LX-151 stirrup as described above. If end of fixture stud is 1¼ in., or more back of wall, use LX-153 stirrup which is like LX-151 but longer.

On box covers 52C63 and 54C63. These box covers are sold by ten outlet box manufacturers for 4 in. square and 4 in. round or octagon boxes respectively, and are tapped on 3⅜ in. centers vertically so that steel supporting plate may be attached directly to cover by screws furnished with receptacle. Either LX-101 or LX-111 receptacles can be attached to these covers.

Oval finishing plate. After LX-101 receptacle has been installed by any of the above methods, attach LX-301 finishing plate to the steel supporting plate with screws furnished with the finishing plate. Outside dimensions of this plate are 4⅛ in. high x 3⅜ in. wide x ⅛ in. deep.

No. LX-111 Wall Receptacle

No. LX-311 Finishing Plate

Narrow oval wall receptacle. LX-111 wall receptacle illustrated above is the same as LX-101 except that the steel supporting plate is narrower. This eliminates most of the holes provided for attachment. LX-111 can only be attached to outlet boxes by screws spaced 3⅜ in., on centers vertically. They should, therefore, be installed as follows:

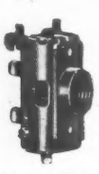
No. 11 Rim-Clamp Box For Old Work

On 4 in. Outlet boxes with box covers. Square boxes with No. 52C63 box covers, or round or octagon boxes with 54C63 box covers should be used. The steel supporting plate of

LX-111 is then attached directly to box cover with No. 8-32 screws furnished with the receptacle.

Narrow oval finishing plate. After LX-111 receptacle has been installed by any of the above methods, attach LX-311 finishing plate to the steel supporting plate with screws furnished with the finishing plate. Outside dimensions of this plate are 4⅛ in. high x 2 1/16 in. wide x ⅛ in. deep.

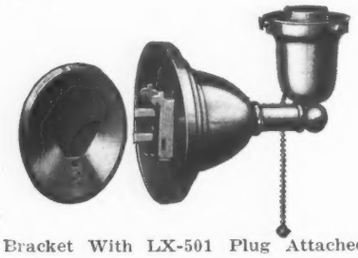
Additional outlets and old work. No. 11 rim-clamp box is intended to provide a metal lined opening for fishing wires or cable and a finished support for either LX-101 or LX-111 wall receptacles. The clamps grip the lath on both sides and the box is then installed flush and the clamps plastered in. The front clamp has two tapped holes spaced 3 3/32 in. on centers vertically to which the steel supporting plates of Elexit receptacles are attached direct with No. 8-32 screws furnished with the receptacle.



No. LX-501 Wall Plug

No. LX-511 Wall Plug

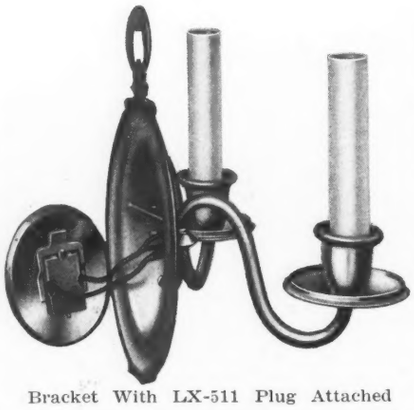
Plugs for rigid attachment to wall brackets. LX-501 plug is threaded ⅜ in. female for permanent attachment to slip canopy brackets or may be bushed down for use on brackets supported by center knobs. LX-507 plug (not illustrated) is the same as LX-501 except that it is threaded ⅛-in. iron female for use on brackets supported by center knobs, or it may be permanently attached to slip canopy brackets made of ⅜-in. brass tubing.



Bracket With LX-501 Plug Attached

In attaching these plugs to slip canopy brackets, care should be taken to see that the back edge of the canopy will slip to a position ⅛ in. back of the back edge of the plug, as this is the relative position it will occupy when the bracket is installed on an Elexit receptacle.

Plug with spring hook for bridge brackets. LX-511 plug is for attachment to bridge brackets by the electrical wires only. Sufficient slack wire should be allowed so that the plug may be conveniently inserted in the receptacle and then the bridge of the bracket slipped over the spring hook. Care should be taken to see that the bridge is set into the bracket back so that the front of bridge is not more than ⅜ in., and the back of bridge not less than 3/16 in. within the edge of the bracket that rests against the wall.



Bracket With LX-511 Plug Attached

Fixture design. Lighting fixtures have heretofore been designed to meet individual rather than standardized conditions, a fact which has greatly increased the cost of both manufacture and installation. Now that a standard lighting outlet condition has been provided, every lighting fixture designer should have a pair of Elexit receptacles on a sample board in the designing room, with a set of the Elexit plugs provided for the various types of brackets as now ordinarily constructed in the regular fixture trade.

Elexit devices may be obtained from the following manufacturers or their distributors: The Arrow Electric Company, Benjamin Electric Manufacturing Company, The Bryant Electric Company, The Cutler-Hammer Manufacturing Company, Economy Fuse and Manufacturing Company, General Electric Company, The Hart & Hegeman Manufacturing Company, Harvey Hubbell, Incorporated, H. T. Paiste Company, Pass and Seymour, Incorporated, and Weber Electric Company.

Record of Lighting Fixture Patents

Issued from March 7 to March 28, 1922

Compiled by NORMAN MACBETH
Consulting Illuminating Engineer, New York

Mechanical Patents

1,409,114. Picture Illuminator. Godfrey Loveberg, Los Angeles, Cal. Filed Jan. 20, 1920. Issued March 7, 1922.

1,409,685. Lighting Fixture. Garry J. Dormandy, Troy N. Y., assignor of one half to United Shirt & Collar Company, Troy, N. Y. Filed Jan. 8, 1921. Issued March 14, 1922.

1,410,325. Electric Light Fixture. Oscar Hupferman, Brooklyn, N. Y. Filed Oct. 15, 1920. Issued March 21, 1922.

1,410,602. Universal Fixture Stem. Clarence H. Rockey, Chicago, Ill. Filed Feb. 24, 1920. Issued March 28, 1922.

1,410,985. Electric Lighting Fixture. Richard M. Beard, New York, N. Y. Filed Oct. 15, 1917. Renewed Mar. 16, 1921 Issued Mar. 28, 1922.

1,411,002. Electric Light Socket. Marvin H. Davis, Douglas, Ariz. Filed Dec. 3, 1919. Issued Mar. 28, 1922.

Design Patents

The following are ALL the design patents pertaining to lighting materials issued by the U. S. Patent Office, from March 7, 1922, to March 28, 1922, inclusive.

60,560-562. Lighting Fixture. Paul Mohrmann, Chicago, Ill., assignor to Friedley-Voshardt Company, Chicago, Ill. Filed May 28, 1921. Issued March 7, 1922. Term of patent seven years.

60,569-71. Shade for Lighting Fixtures and Portable Lamps. Henry E. Rainaud, Meriden, Conn., assignor to The H. E. Rainaud Company, Meriden, Conn. Filed Aug. 15, 1921. Issued March 7, 1922. Term of patent seven years.

60,603. Candle Holder. Harold M. Bowdoin, Tuckahoe, N. Y. Filed Sept. 25, 1920. Issued March 14, 1922. Term of patent, three and one-half years.

60,605. Lamp. William Manning Bradley, Los Angeles, Cal. Filed June 14, 1921. Issued March 14, 1922. Term of patent, three and one-half years.

60,614. Electric Fixture Arm. Julius S. Garfinkle, New York, N. Y. Filed Apr. 25, 1921. Issued March 14, 1922. Term of patent, seven years.

60,618. Lamp. Harry M. Knudsen, St. Paul, Minn. Filed Feb. 4, 1921. Issued March 14, 1922. Term of patent, seven years.

60,623. Electric Lamp. Newman Nelson, Clinton, Iowa. Filed Apr. 30, 1921. Issued March 14, 1922. Term of patent, three and one-half years.

60,624-25. Lighting Fixture Arm and Bracket. Albert J. D. Ohm, New York, N. Y., assignor to Lion Electric Appliance Company, Inc., New York, N. Y. Filed Aug. 20, 1920. Issued March 14, 1922. Term of patent, three and one-half years.

60,626. Arm for Lighting Fixtures. Arnold J. Petersen, Cedar Rapids, Iowa. Filed Mar. 12, 1921. Issued Mar. 14, 1922. Term of patent, seven years.

60,627,29. Arm for Lighting Fixtures. Arnold J. Petersen, Cedar Rapids, Iowa. Filed Mar. 12, 1921. Issued Mar. 14, 1922. Term of patent seven years.

60,633. Electric Light Bracket. Cephas B. Rogers, Danbury, Conn. Filed May 19, 1921. Issued March 14, 1922. Term of patent, fourteen years.

60,710. Bracket Back. Gustave E. Villaret, New York, N. Y., assignor to J. H. White Manufacturing Company, Brooklyn, N. Y. Filed May 21, 1921. Issued March 21, 1922. Term of patent, three and one-half years.

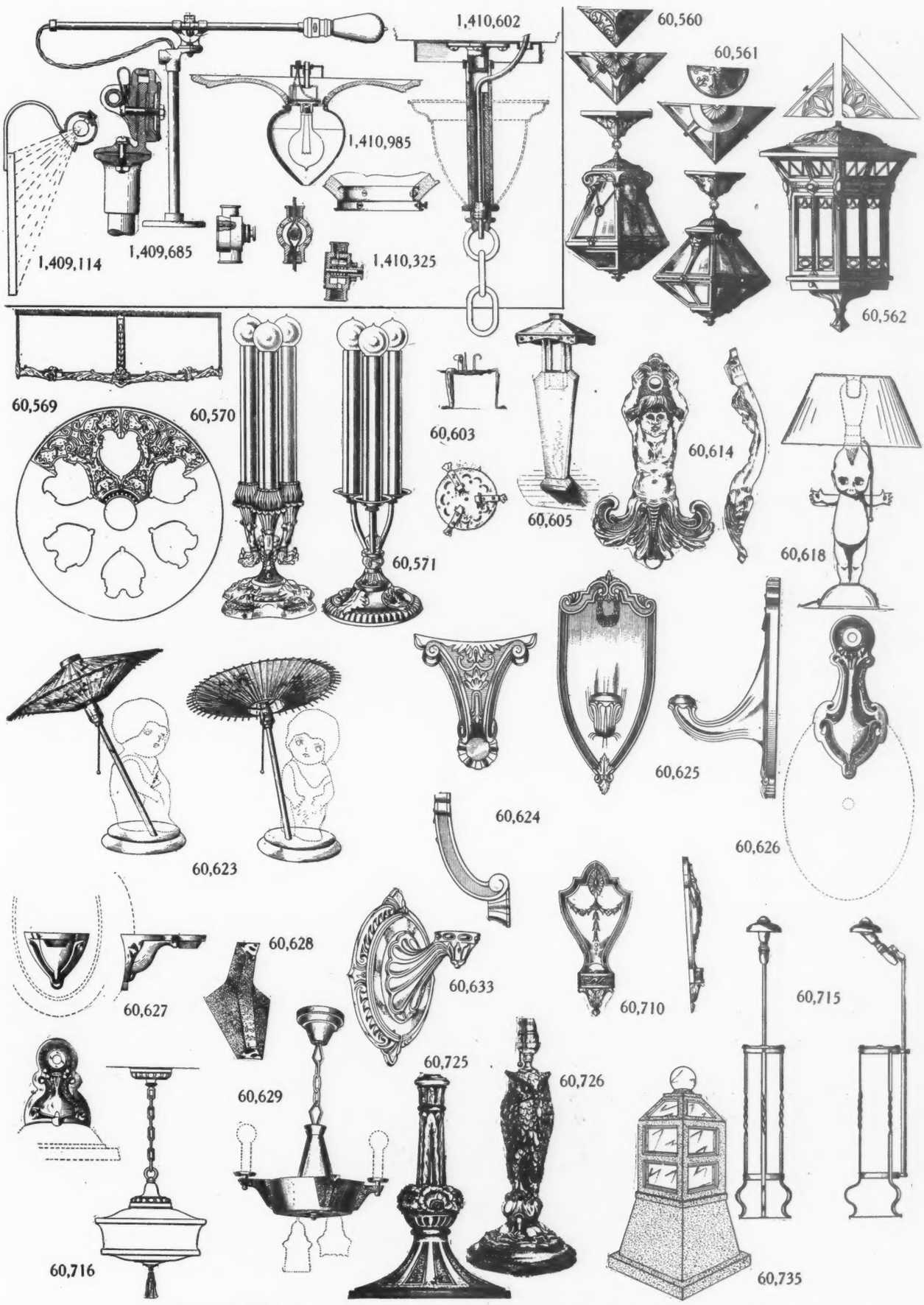
60,715. Smoker's Stand. David Worobow, Chicago, Ill. Filed June 9, 1921. Issued March 21, 1922. Terms of patent, three and one-half years.

60,710. Electric Lighting Fixture. George R. Ainsworth, Great Neck, N. Y. Filed May 16, 1921. Issued March 28, 1922. Term of patent, fourteen years.

60,725. Lamp Base or Similar Article. Edmund Hofmann, Chicago, Ill. Filed June 20, 1921. Issued March 28, 1922. Term of patent, three and one-half years.

60,726. Lamp. St. John Issing, New York, N. Y., assignor to Anna Lederer, New York, N. Y. Filed June 28, 1921. Issued March 28, 1922. Term of patent, three and one-half years.

60,735. Illuminated Highway Guidepost. William T. Rogers, Kansas City, Mo. Filed June 6, 1921. Issued March 28, 1922. Term of patent, seven years.



Copies of illustrations and specifications for patents may be obtained from the Commissioner of Patents, Washington, D. C., for 10 cents each

Sales Helps for the Dealer

Show Window, Counter, Mail Advertising and Specialty Aids Which Manufacturers Offer to Help You Get More Trade

S. E. D. Announces New Publication Schedule

A definite publication schedule of the dates on which it will release its next business-building aids and educational material for general distribution has been announced by the Society for Electrical Development, 522 Fifth Avenue, New York City. The list follows:

May 2.—"Customers Versus Population," for Canada, showing percentage of wired homes in Canada.

May 5.—"Adequate Wiring Folder," a small folder for public distribution.

May 10.—"Appliance Selling Suggestions," a monograph of procedure, with details of successful campaigns.

May 15.—"Editorial Suggestion Service to Newspapers and Central Stations."

June 5.—"Home Electrical Plans," a monograph on how to organize and conduct an "electrical home."

June 5.—Booklet for distribution to visitors at electrical homes.

June 15.—"Useful Information for Architects," revision of previous society publication.

Other material recently released was:

April 17.—"Editorial Suggestion Service," promoting good will for public utilities; distributed to newspapers and central stations.

April 20.—"Building Housewiring Business," a monograph giving details of how to obtain housewiring business.

April 20.—Sales helps for use in obtaining housewiring business, "ad" cuts, slides, letters, window displays, etc.

April 20.—"Why Is an Outlet?" a pamphlet for distribution to the public, promoting the idea of convenience outlets; first issued by the S. E. D. in 1918, revised and improved for 1922 use.

April 27.—"Partial Payment Plans," a monograph giving details of plans of time-payment financing.

Radio Sets as Premiums for Junior Salesmen

"It's a caution how young America has taken to radio," thought Carl M. Randel, sales manager for the P. A. Geier Company, as he noted the amount of business in this equipment a leading dealer was doing.

"Some of these youngsters will make good electrical salesmen some day," he mused. "Some day, why not today?" he corrected.

And that was the beginning of the Junior Sales Force Plan that is now working out successfully among Royal dealers to help them sell not only more radio equipment, but more electric appliances of every sort.

"You'd be surprised at the amount of radio apparatus owned by youngsters. A mere kid in my neighborhood has a $200 outfit. But most of the young enthusiasts haven't the doting uncle this chap has. Most of them are hard put to it to find two-bits for a new crystal detector.

"This lack of money is the dealer's chance—strange as that statement may sound. For the smart dealer soon comes to know all his radio patrons and when some dyed-in-the-wool young radio bug casts envious glances at a tuning coil which he cannot afford, it is time for Mr. Dealer to say, 'See here, son. If you sell a Royal cleaner or give me the name of a prospect who will buy one, that coil is yours.'

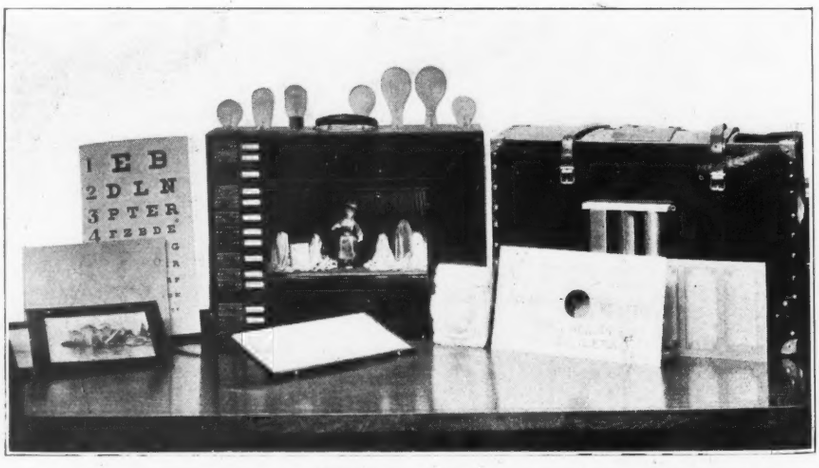
"Bait like that has it all over money payment. It makes all the youthful business talent in the neighborhood work like the very old mischief to sell mamma, auntie, and all their friends. And son radio-expert has a lot of prestige in his home circle, you'd better believe. Mother and mother's friends would take his advice in matters electrical before they'd take Edison's.

"I know the junior sales force pays. Take the lamp business: A Buffalo firm is doing a $50,000 business largely through school boy campaigns. In Cleveland, a firm sold $1,500 worth of lamps in two months, employing ten boys. Standard Electric Company of Hammond, Ind., sold 1,536 lamps in twenty-one days through a crew of boys.

"My business is to sell cleaners and this plan I find is a great help. But it works equally well for all sorts of devices and I don't begrudge the dealer the sales he makes in washing machines and other appliances as a result of The Royal Junior Sales Plan. Not a bit of it!"

The Universal Electric Stage Lighting Company, 321 West Fiftieth Street, New York City, announces that its new Catalog K has now been issued and supersedes Catalog H.

A Suitcase Outfit for Demonstrating Good Lighting

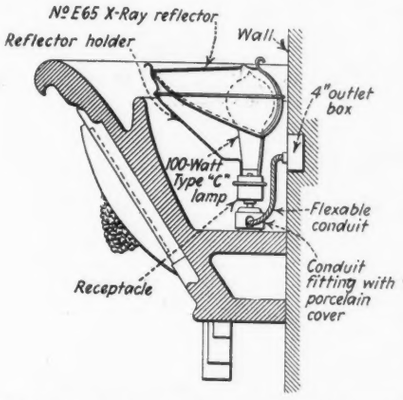


A "demonstration suitcase" has been developed by L. C. Kent of the National Lamp Works for the use of jobbers and agents selling lamps and other lighting equipment. This suitcase is a compact demonstration outfit for illustrating the principles of artificial lighting, and although carrying all the equipment shown, it is no larger than many salesmen's sample cases and slides easily under a Pullman seat. The outfit complete weighs less than 40 pounds. With the aid of the demonstration suitcase it is possible to give, in an interesting way, the story of the development of the incandescent lamp, and to illustrate the evils of glare and the importance of the correct use of shadows, to produce a great variety of color effects, and to show the relation between quantity of illumination and ability to see. A miniature show-window trim is used to illustrate the application of these principles.

Lighting the Theater

If theater-lighting jobs are comparatively rare, they are nevertheless well worth the best one can put into them—for years afterward they will stand as conspicuous examples of the quality of one's work. To help the contractor meet the many and varied problems of theatrical lighting, a new booklet has recently been issued by the National X-Ray Reflector Company of Chicago — entitled "Lighting the Theater."

Illumination of the theater without ceiling fixtures, either by cove lighting or by wall box lighting, is pointed out as being the present trend, and helpful suggestions are given to obtain the best results with both of these methods. Color lighting, stage lighting, foyer lighting, flood lighting—all of these subjects are covered, as is general auditorium lighting. The book is profusely illustrated with photographs of recent installations in well-known theaters.



"One advantage of the use of wall boxes," points out the new X-Ray booklet on theater lighting, "is the marked effect of spaciousness and apparent elevation of the ceiling." The position of reflector and lamp are made clear in the illustration.

"Where Is My Local Market for Lighting Sales?"

To picture to the dealer the waiting market for lighting sales right in his own town, the Beardslee Chandelier Manufacturing Company, 223 South Jefferson Street, Chicago, has prepared a new "Denzar" Catalog, No. D-7. The booklet tells in pictures, more than in words, what buildings and institutions are open to approach for better lighting.

"Merchants today," it points out in the pages on good store lighting, "realize the powerful influence of good lighting on sales, not only because the merchandise is shown to better advantage, but also because of its stimulating effect on the sales people and customers. No better proof of the sales value of good illumination can be found than in our large mercantile stores. But large stores are not alone in the use of good lighting. In intimate shops and small stores, where charming environment is an incentive to spending, good lighting helps make inviting interiors. And whether the store be large or small, plain or ornate, there is a type, style and size to exactly meet the decoration and physical requirements and satisfy personal preference."

One of the most profitable fields for lighting equipment sales is the school buildings in the dealer's city, and the booklet contains four pages of photographs of modern schoolroom lighting. Helpful information is given on four other pages to assist the dealer in selling lighting to banks and offices, and still others to garages, hotels, restaurants, libraries and churches, photographs of all of which are shown as examples of good lighting.

Tell Her More About the Little Fuse

If the little fuse and its uses weren't such a mystery to the average housewife, there would doubtless be fewer hard words said whenever her day's ironing is spoiled by the blowing of a fuse and she "doesn't know what to do." A little patient explaining is usually all that is needed.

In the new folder on its refillable fuses brought out by the Cote Brothers Manufacturing Corporation, Tribune Building, Chicago, stress is laid on the ease and safety with which it may be refilled by the busy housewife. Illustrations show the simplicity of the operation, the always visible rating of the fuse, and the safety of the fuse while in a circuit.

Handbook on Motor Control

Simple descriptions of controllers for electric motors and definitions of the terms used in that connection, have been compiled by the Electric Power Club and published as a handbook.

Words which do not appear in the regular dictionaries are explained in simple language and the pamphlet, in addition to being a handbook for users of electrical control apparatus, gives the meanings of terms with which all users of electrical apparatus should be familiar.

The handbooks may be obtained from leading manufacturers of electric power and control apparatus, or from the executive secretary of the Electric Power Club, S. N. Clarkson, 1017 Olive Street, St. Louis, Mo.

The Dayton Fan & Motor Company, Dayton, Ohio, is mailing out a new and highly attractive catalog covering electric fans and carrying the title: "A Short Talk for Long Heads." Opening with an interesting talk on the principles of cooling, the booklet discusses the construction and operation of Dayton fans, and lists advertising sales helps which include newspaper electrotypes, circulars, envelope stuffers, and sales letter forms.

The Beardslee Chandelier Manufacturing Company of Chicago has issued two small leaflets describing its ceiling rings and the "Safety-Board" holder.

A Co-operative Advertising Drive on the Tired Housewife

Take it Easy
During the Summer
WOMEN! You were made to grace and rule the home, not to be its serf and drudge. Why undergo the undermining, unnecessary labors of housekeeping, which are so oppressive during the heat of the summer? Or why ask your help to do the things that you'd dread to do yourself?
This shop presents a wealth of labor-saving and heat-defying devices that will do your summer work competently and keep the home cool, comfortable and liveable.
Learn how economically you can install electrical washers, mangles, irons, vacuum cleaners, toasters, fans and cooking appliances. We sell them on easy terms and low cash prices. The maintenance cost is trifling—less than that of the present, out-of-date methods.
Buy From ELECTRICAL Goods Dealers
Southern California Edison Co.
Southern Sierras Power Co.
Snyder & Bell 337-339 F St.
Field Electrical Co. 361 E Street

By co-operative electrical advertising is meant the united effort of the electric light company and the dealers of a given town or community to "sell" the public on the conveniences of electricity by a series of attractive advertisements in newspapers or other popular mediums. That this form of publicity is highly successful has been proved by the electrical fraternity of San Bernardino, Cal., which on the basis of its experience urges more frequent advertising in order to obtain increased sales of electrical appliances on the part of the dealer and a greater consumption of current for the central station. The slogan "Buy Electrical Goods from Electrical Dealers" runs through all the advertising, but the message varies to meet the season and particular occasion, as shown by the accompanying advertisement, clipped from a San Bernardino newspaper. The application of this co-operative advertising is one of the results of the effective work of the California Co-operative Campaign in spreading the electrical message.

New Merchandise to Sell and Where to Buy It

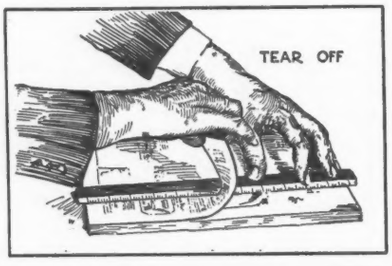
Appliances, Socket Devices and Wiring Supplies Which Manufacturers and Jobbers Are Putting on the Market

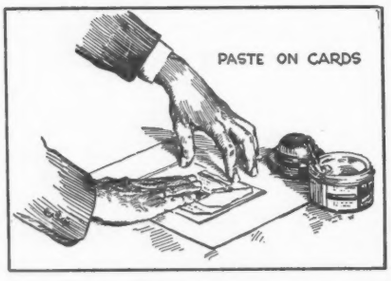
Including Many New Appliances Suitable for the Home Electric

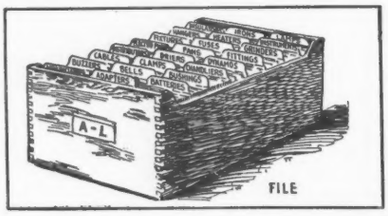
How to Use These Pages to Make Your Own Buying Index

Beginning with the September, 1917, number ELECTRICAL MERCHANDISING has been furnishing its readers with the selective new-merchandise catalog service continued on these pages. By tearing out those items which affect your business and pasting them on filing cards, you can make a buying index that will put information on *what is made and who makes it* right at your finger's end.

Every item, with its illustration, will fit a standard 3-in. by 5-in. filing card. Or, if preferred, these items can be pasted on sheets of paper for binding in a loose-leaf catalog or folder.







This section "New Merchandise to Sell" is an editorial text section prepared by the editors solely in the interests of readers of ELECTRICAL MERCHANDISING. As its title explains, its purpose is to put before our readers information concerning the new merchandise and latest inventions on the market.

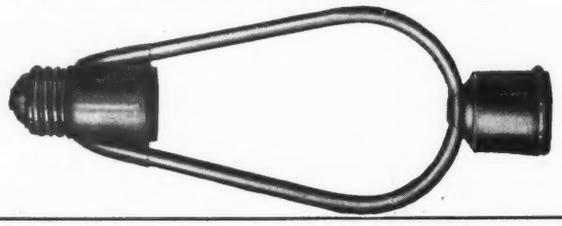
To be described here, articles or devices must be new and of general interest to our readers. These descriptions are solicited from all manufacturers, and the items are published free of all cost to the maker of the device, and without respect to advertising or any other consideration, except their interest to the reader. The editors are the sole judges of what shall appear in this section, and readers may depend upon the independent character of this service.

Double-Duty Plug with Drop Socket

Electrical Merchandising, May, 1922

The Tri Novelty Company, Wilson, Pa., has now ready for the market the "Neidig" drop socket—a new socket which, besides immediately connecting to any lighting fixture without removing the shade, is a truly double-duty socket, giving the use of the lamp within the shade and at the same time any appliance that may be attached to the lower socket.

It is quickly attached or detached, being simply screwed in like a bulb. The finishes are either brushed brass or white enamel.



Telephone Receiver Set

Electrical Merchandising, May, 1922

The Cutting & Washington Radio Corporation, 35 Water Street, New York City, has recently perfected a radio telephone receiver, which, it declares, does not require technical knowledge or professional skill to operate. This receiver is said to incorporate features heretofore confined exclusively to apparatus intended for the use of a trained operator.

It not only detects faint signals from distant points but amplifies them to such an extent that connection to the phonograph is possible and an entire group may "listen in."

Extension-Cord Connector

Electrical Merchandising, May, 1922

The Magnus Electric Company, 115 Broad Street, New York City, has placed on the market an extension-cord connector for attaching additional cord length or for breaking the current in the length of the cord.

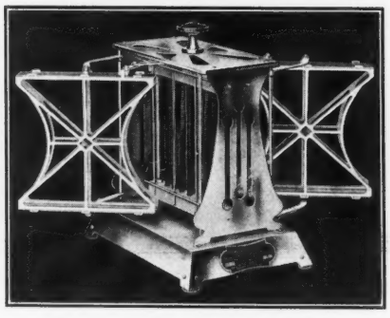
In this manner, portable cords may be made to extend as far as they are needed without the necessity of splicing. The body of the device is made of a high-grade composition and is provided with strong phosphor-bronze spring contacts. The cord opening measures $\frac{11}{32}$ in. and has ample tying space.

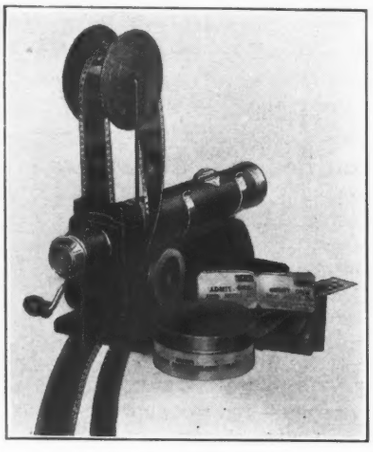
Electric Toaster

Electrical Merchandising, May, 1922

With the new "Excelsior" toaster just added to the line of heating appliances offered by Geo. Borgfeldt & Company, Sixteenth St. and Irving Place, New York City, one turn of a knob at the top of the toaster turns the two large racks for the toast at the same time. There is no necessity of turning first one piece and then the other.

The toaster is equipped with the "70-50" Cutler-Hammer "Feed-Thru" switch for easy switching on or off of current.





Flashlight Movie Lantern

Electrical Merchandising, May, 1922

A flashlight instead of house current is used as a source of light supply, in the new toy motion picture machine offered by the Keystone Manufacturing Company, 53 Wareham Street, Boston, Mass. The machine uses "Keystone Moviegraph" films, and is supplied with lantern slides, theater tickets, etc.

Automatic Windshield Cleaner

Electrical Merchandising, May, 1922

With the "Mayo-Skinner" automatic windshield cleaner, the engine is said to keep the windshield clear for perfect vision at all times. This device is made by the Mayo-Skinner Manufacturing Company, 2115 Elston Avenue, Chicago, Ill.

This windshield cleaner works through power furnished by suction from the engine or the vacuum tank. When installed, a button sets the swinging arm in motion. The cleaner arm keeps going after the manner of a clock pendulum. It works steadily and is said to keep the glass entirely clean.

Combined Conduit Box and Fixture Switch

Electrical Merchandising, May, 1922

A small, rugged, six-ampere fixture switch made by the McGill Manufacturing Company, Valparaiso, Ind., fits the knock-out of conduit boxes by use of the large nut. With the small extra nut supplied with each switch, it can be installed in ceiling pans, brackets, fixtures, canopies and electrical apparatus.

Head Band

Electrical Merchandising, May, 1922

In designing the new Holtzer-Cabot head band for radio fans, special attention was given to eliminating knurled thumb nuts which catch the hair. The Holtzer-Cabot Electric Company, Boston, is the manufacturer.

Enclosing Glass for Commercial Lighting Fixtures

Electrical Merchandising, May, 1922

Two new designs of "Lunite" enclosing glass units for commercial lighting, have recently been announced by the H. Northwood Company, Wheeling, W. Va.

Enclosing a lamp of the proper intensity the unit shown in the illustration is designed to distribute a mellow yet strong light without sharp shadows or lines of contrast. It is especially adapted for lobbies, public buildings and other places where a one-piece unit is desired. It can be used with either ceiling or suspension fixtures.

These units are made in two shapes and four sizes to serve Mazda type C lamps up to and including 500-watt size. They are blown in one piece; the glass stays in its natural color and is not enameled after completion.

The company does not supply the fixtures complete, but merely the glass.

Electric Hot Knife for Re-Sealing Storage Batteries

Electrical Merchandising, May, 1922

The Service Station Supply Company of 30-32 East Larned Street, Detroit, Mich., is manufacturing an equipment for removing sealing compound, and resealing storage batteries, known as the "Hydrate" hot knife. This is an electrically heated tool with a patented hot blade. The knife is said to be superior to a gas flame, as it carries the heat to the spot needed, and stays hot without reheating, and diminishes the possibility of firing the compound or burning the case or jar.

When a battery is opened up by the old method (a gas flame and putty knife) it is necessary to continually reheat the knife blade. The new knife eliminates this by the use of continuous electric heat.

The knife consists of a blade, handle wire and connections. The insulated clips connect to the poles of a 6-volt battery, and the knife is ready for instant use.

Combination Utility Table and Electric Sewing Machine

Electrical Merchandising, May, 1922

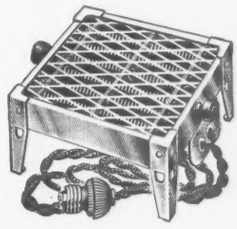
As its newest model in cabinets for its electric sewing machine, the White Sewing Machine Company, Cleveland, Ohio, is offering Model No. 83, a three-drawer utility stand which, when opened, reveals the sewing machine ready for work. The stand may be had in walnut, golden oak or fumed oak.

The machine itself has the usual features of other "White" electric sewing machines, including knee control.

Small Table Grill

Electrical Merchandising, May, 1922

Rated at 400 watts, the new table grill offered by the Russell Electric Company, 140 West Austin Avenue, Chicago, is 5 in. square and 3 in. high. It is nickel plated, has two insulated handles, a mica supported radiant element, and weighs only 1 lb.



Electric Incubator

Electrical Merchandising, May, 1922

The "Marvel" electric incubator manufactured by the Marvel Incubator Company, Racine, Wis., is of wood construction with heavy fibre board lining throughout.

An automatic regulator controls the heat. After once set the heat is automatically maintained. The heat necessary for hatching is produced by electric light bulbs (no resistance coils or heating units used). As further protection, there is a copper radiation system retaining water, which retains the heat, thereby absolutely safeguarding against an unsuccessful hatch. This feature also supplies humidity in the egg chamber which is essential for a perfect hatch. Automatic ventilating, a deep nursery and egg chamber, a thermometer and egg tester are other features.

Electric Light and Power Plants

Electrical Merchandising, May, 1922

There are hundreds of towns and villages in the United States which are not supplied with electrical service, and yet have schools, colleges, stores, county and municipal buildings, factories, garages, and large estates, which demand electrical power far beyond the capacity of the average small electric power and light plant.

To meet this need, the Matthews Engineering Company of Sandusky, Ohio, has brought out a line of large plants from 15 kw. up to 65 kw. in 110 and 220 volts, direct current, and also a line of alternating-current sizes.

Continued on third and fourth pages following, for your convenience in clipping and filing. Each item will fit a 3 x 5 in. standard filing card.

Gossip of the Trade

Glimpses of Electrical Men at Work, at Play, and in Convention— as Caught by Lens and Pencil

Associated Manufacturers Will Meet at Spring Lake Beach, N. J. June 19-23

At the meetings of the sections of the Associated Manufacturers of Electrical Supplies, held during the week of March 13th, it was unanimously voted to hold the regular summer section meetings at Spring Lake Beach, N. J., at The Essex and Sussex Hotel. The meetings will take place during the week commencing June 19th and an interesting and varied program is being arranged. It is planned to make this the largest and best summer meeting the Association has held.

Tests of Substandard Electric Irons

Thomas H. Day, executive secretary, National Association of Electrical Inspectors, Boston, Mass., reports a somewhat extended marketing in New England of two substandard makes of electric pressing iron. No markings appear on the irons nor upon the cartons containing them to indicate their source of manufacture. The handles of both types are of wood, painted yellow. On samples of one type appear only the figures "220"; on samples of the other, voltages are indicated and the word "Discus" appears. Some of these irons were delivered to a New Haven (Conn.) firm in metal-lined German-ordnance boxes. Samples tested by Mr. Day (purchased at one dollar each, complete, with wooden attachment plugs and four feet of substandard flexible cord) quickly broke down.

Short circuits, due to poor assembly, which were found in two of the devices, would in the hands of the inexperienced have disrupted the circuit fuses. In the four devices tested, a difference in potential of 110 volts was found between the devices and a water pipe. This makes them dangerous instruments to use in a laundry or in any location which may be in proximity to plumbing fixtures, or on a cement floor. Three devices broke down in three, twenty, and thirty-five minutes, respectively. The fourth device did not render any service.

Calendar of Coming Conventions

NATIONAL ELECTRIC LIGHT ASSOCIATION, *Atlantic City, N. J. May 15-19.*

NATIONAL ELECTRICAL CREDIT ASSOCIATION, *Detroit. May 18-19.*

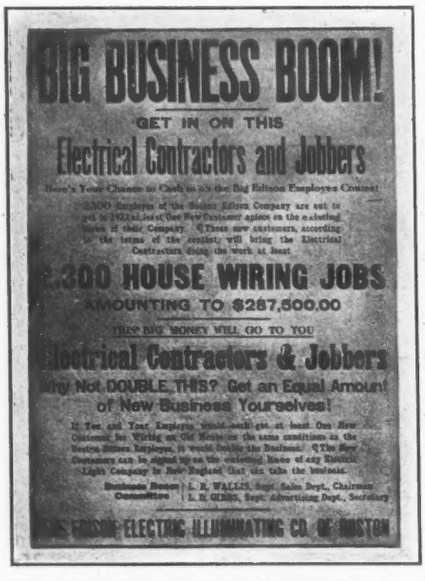
ELECTRICAL SUPPLY JOBBERS ASSOCIATION, *Hot Springs, Va.. May 22-26.*

WESTINGHOUSE AGENT-JOBBERS' ASSOCIATION, *Hot Springs, Va. May 29-31.*

ASSOCIATED MANUFACTURERS OF ELECTRICAL SUPPLIES, *Spring Lake Beach, N. J. June 19-23.*

NATIONAL ASSOCIATION OF ELECTRICAL CONTRACTORS & DEALERS, *Cincinnati, Ohio. Week of Oct. 9.*

"Business Boom" Poster Sent to Jobbers and Dealers


BIG BUSINESS BOOM!
GET IN ON THIS
Electrical Contractors and Jobbers
2,300 HOUSE WIRING JOBS
AMOUNTING TO $267,500.00
Electrical Contractors & Jobbers
Why Not DOUBLE THIS? Get an Equal Amount of New Business Yourselves!
EDISON ELECTRIC ILLUMINATING CO. OF BOSTON

The Edison Electric Illuminating Company of Boston is further extending its campaign for new customers by distributing the accompanying poster to New England jobbers and electrical contractors in its territory. Three thousand of these posters have already been mailed and the effect of the co-operative drive for the wiring of old houses is already being felt.

The Erner & Hopkins Company of Columbus, Ohio, electrical jobbers, has organized a complete radio department in charge of Harold E. Day. The company has contracted to handle products of the Radio Corporation of America, the Clapp-Eastham Company, the Federal Telephone and Telegraph Company, the Magnavox Company and other similar lines.

Tax on Portable Lamps Repealed

The new tax law has repealed the luxury tax formerly collected from the retail dealer on portable electric lamps and shades. It is, therefore, no longer necessary for the retail dealer to collect a tax on portable lamps and shades from his customers; that is, providing the lamps or shades are not manufactured or imported by the dealer, but are purchased from others. When the dealer manufactures or imports a portable lamp or a shade for a portable lamp, he must pay the Government 5 per cent tax on such amount as exceeds $10. In the case of a portable lamp and shade each may be figured as a separate item.

The Carter Electric Company of Atlanta, Ga., announces it will handle at its headquarters, 21 Haynes Street, wholesale business only. To take care of its retail department, the company has organized the Capital Electric Company at 63 Peachtree Street, Atlanta, which will sell at retail only. "For the present," reads a notice from the president of the company, "the Carter Electric Company will own 98 per cent of the stock in the Capital Electric Company and assumes responsibility for the payment of invoices covering merchandise ordered by the Capital Electric Company."

Hatheway & Knott, manufacturers agents, formerly at 117 West Street, New York City, have moved to new headquarters at 16 Hudson Street. Hatheway & Knott represent locally the following concerns: Wirt Company, Rattan Manufacturing Company, Killark Electrical Manufacturing Company, Birch Manufacturing Company, Heinemann Electric Company, Utility Fittings Company, McGill Manufacturing Company, Beaver Machine Tool Company, Standard Flexible Conduit Company.

Arthur Organ, sales manager of the Hunter Fan and Motor Company, 46 West Forty-sixth Street, New York City, has returned from a trip through the Southwest with J. C. Hunter, and reports excellent business conditions enroute. Among the orders received was one for approximately 750 ceiling fans for the new office building of the Magnolia Petroleum Company at Dallas, one of the largest fan orders ever placed. The building will have an electric ceiling fan in every office as part of the office equipment. Another order received was for a large number of ceiling fans for the new Maverick Building in San Antonio, Tex.

"The Code at a Glance"—Makes Confusion of Clauses Understandable

Throughout the country thousands of electric journeymen are engaged in the wiring of buildings. It is their business to know the National Electrical Code. Most of them do, in a general way. But the Code is not as conveniently arranged as it might be, to fit the needs of the man on the job, and so preventable omissions and errors often creep into his work.

Now comes "The Code at a Glance," a handy-size book with durable binding, prepared by Hubert S. Wynkoop, M. E., at the suggestion of the National Association of Electrical Contractors and Dealers.

For twenty-five years Mr. Wynkoop has been at the head of the electrical inspection service of the City of New York, and no one appreciates better than he the transcript of the National Electrical Code. Consequently he has rearranged in alphabetical order all the Code requirements which it is essential for the contractor, the wireman, the estimator, and the inspector to have constantly at hand.

Since the National Electrical Code has become primarily an electrical contractor's code, it was appropriate that their association should have taken the lead in presenting to the industry such a valuable and clear compilation of the standards under which they perform their work.

"The Code at a Glance" is published by the National Association of Electrical Contractors and Dealers, 15 West 37th Street, New York City, and its price is one dollar, postpaid.

Alpha Electric Buys Northwestern Company at New York

The Alpha Electric Company, Inc., of New York City, bought the stock and fixtures of the Northwestern Electric Equipment Company at New York, assuming also the local agent-jobbership for the Westinghouse company.

The Alpha Electric Company, Inc., was organized in April, 1912, by A. F. Thatcher, M. Coleman, G. E. Coleman, W. W. Williamson and Frank H. Taub. The original place of business was at 116 West Twenty-ninth Street. The company had three floors at that location, but in six years, due to its rapid expansion, the quarters proved too small and additional space was acquired at 151-155 West Thirtieth Street—the company's present stand. An additional warehouse was purchased at this time at 216-218 West Thirtieth Street. This move more than tripled the floor space of the company.

Shortly after the Northwestern Electric Equipment Company was formed in 1908, it became the Westinghouse agent-jobber for the New York territory, and the new arrangement will give the Alpha Company a complete line of Westinghouse apparatus and appliances, as well as pole-line material.

The officers of the Alpha Company are: President, M. Coleman; vice-president and treasurer, G. E. Coleman; Secretary, A. F. Thatcher; general manager, W. W. Williamson; sales manager, H. S. Wilson; manager specialty department, E. A. Sweeney.

From the land of magnolias and oil-gushers—Arthur Hardgrave who represents the Insull interests in the Southwest with headquarters at Dallas in the State of Texas, in which ample commonwealth he is a leader of electrical co-operative effort. Mr. Hardgrave is the president of the Southwestern Electrical and Gas Association, whose annual convention is being held at San Antonio, Texas, the third of this merry month of May.

Edward M. Garey, Inc., recently organized as manufacturers agent, has taken over the entire selling rights for the Hudson Brass Works, Brooklyn, fixture manufacturers, for thirty-one states. Mr. Garey has for many years been connected with the electrical industry in the lighting fixture business.

The Lightolier Company, 569 Broadway, has appointed Robert Fish advertising manager of the company. Mr. Fish is succeeding J. X. Netter, who recently resigned to become vice-president of the Creske-Everett Company, New York City, advertising agents.

The E. H. Freeman Electric Company, Trenton, N. J., manufacturers of porcelain and electrical specialties, announces the appointment of Wood & Lane, 1012 Market Street, St. Louis, Mo., as its representative in that city and surrounding territory.

I. P. Frink, Inc., Twenty-fourth Street & Tenth Avenue, New York City, has recently opened the following new offices: Chicago, Ill., Monadnock Bldg., Frank Getchell, manager; Cincinnati, Ohio, 17 Greenwood Bldg., R. M. Booth, manager; Cleveland, Ohio, 336 The Arcade, Frank Reske, manager; Philadelphia, Pa., Franklin Trust Bldg., C. E. Fairbanks, manager; San Francisco, Cal., 77 O'Farrell Street, Herbert C. Storm, manager; Boston, Mass., 161 Summer Street, Daniel Fitts and Harold Morse, managers.

The George F. Grant Co. has disposed of its interests in Newark, N. J., and New York City, and has occupied its new stores at 318 East Genesee St., and 313 E. Fayette St., Syracuse, N. Y., as an electrical supplies jobbing house. Frederick L. Grant, secretary, is territory agents for United tungsten and nitrogen lamps and automobile bulbs, trading as United Electric Sales Company and has removed from 319 North Clinton St., Syracuse, to 318 East Genesee St.

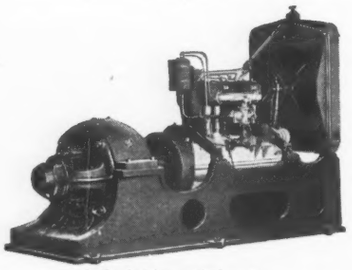
The Chase-Shawmut Company of Newburyport, Mass., manufacturer of inclosed fuses, N. E. C. porcelain and slate cutouts, fuse wire, fuse links and ground clamps, announces the appointment of the J. S. Jacobson Company as its Chicago representative, which company has recently taken up new quarters at 627 West Jackson Boulevard.

Max Shapiro, of 3759 Third Avenue, Bronx, New York City, has recently entered the jobbing field with a full line of electrical supplies, fixtures, and brass parts. Mr. Shapiro was formerly in the electrical contracting business.

The Canadian Electric Floor Waxer & Polisher Company, Ltd., has recently been incorporated at Toronto, Ont., with a capital stock of $100,000.

The Parr Electric Company, Inc., 77 Warren Street, New York City, announces the appointment of John D. Goodliff as sales manager. Mr. Goodliff has been connected with the Northwestern Electric Equipment Company for the past ten years.

The Robbins & Meyers Company of Springfield, Ohio, manufacturer of electric motors, generators and fans, has made the following changes in its sales organization: N. R. Norman, formerly with the Western Electric Company at its New York office, is now connected with the New York office of the Robbins & Meyers Company; J. E. Timmons, formerly with Frank Toomey, Inc., is now with the Philadelphia office; A. I. Benedict is with the Chicago branch and E. A. Barbeau with the general sales office at Springfield. Mr. Benedict was formerly with the Miller-Seldon Electric Company, Detroit, and Mr. Barbeau with the General Electric and Domestic Electric Companies. J. J. Martin of the Robbins & Meyers Philadelphia office has been placed in charge of the company's Buffalo office.



Lighting Plant

Electrical Merchandising, May, 1922

A new style and size of lighting plant recently developed is the 15 and 20 kw. direct-connected set manufactured by the Matthews Engineering Company, Sandusky, Ohio.

The set consists of a General Electric generator direct connected through a flexible disk coupling to a 4-cylinder, tractor type engine, all mounted on a substantial cast-iron base and water cooled by a McCord radiator which has cast-iron tanks above and below and cast-iron side members.

The plant is built in 110 and 220-volt direct current types, and can be furnished with a special type of switchboard for use with storage batteries. It is also used without storage batteries in both portable and stationary installations. The plant is equally adapted for town lighting, for industrial installations, and for portable work in caravan lighting.

Electric Siren

Electrical Merchandising, May, 1922

The Inter-State Machine Products Company, Inc., Rochester, N. Y., announces a new type of electric siren which it terms the "Quad" side. This siren is along the same lines as the model "M" siren which it has been building for a few years, but is the largest siren, it believes, which has ever been built. It carries four fans instead of two.

Electric Stylo Pen

Electrical Merchandising, May, 1922

An electrically operated writing stylus known as the "Styloelectric" pen is being manufactured by the Post Electric Company, 30 East Forty-second Street, New York. Made in the same size as a fountain pen, the device is a convenient instrument for general use in marking wood, leather and paper. In connection with colored transfer papers the pen can be used to burn brilliant tints into leather, wood, glass, celluloid, hard rubber, etc. The pen is also useful in jewelry and electrical work where a very small and delicate soldering iron is desired.

The pen is supplied complete with two different points, six feet of cord, circuit tap and switch, together with a supply of colored transfer paper. It is pointed out by the manufacturer that the heat of the point is easily regulated.

Electric Lamp Adapter for Vases

Electrical Merchandising, May, 1922

A device for converting a vase into a portable lamp has been placed on the market by the Reliable Electric Service Company, 104 East Twelfth Street, New York City. To mount a vase with one type of adapter, it is simply necessary to drill a hole through the bottom, set in the unit and tighten the nut at the bottom. By the use of adapter No. 37, the vase may be converted into a lamp by slipping the unit into the vase and no drilling is required. The units are made in all sizes, finished in brush brass and Japanese bronze, and equipped with a brass base, a 6-ft. cord and an attachment plug.

Vacuum Cleaner

Electrical Merchandising, May, 1922

Some of the improvements announced for the new Type "C" electric cleaner developed by the Torrington Company, Torrington, Conn., are:

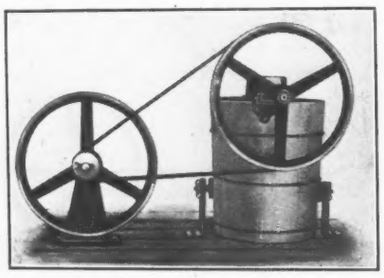
The substitution of a new metal alloy, aluminum and silica, for steel; a new removable nozzle device; the introduction of an intermediate pulley which speeds up the brush; a novel and convenient handle-tilting device; and the changing of the bag to the right-hand side, out of the way of a woman's skirt.

Power Attachment for Icecream Freezer

Electrical Merchandising, May, 1922

A complete power attachment for driving icecream freezers of from 2 to 6 qt. sizes, is being offered by Winfield H. Smith, 10 Lock Street, Buffalo, N. Y. The pulley on the freezer screws onto the shaft in place of the crank and is provided with threads of various sizes to fit the different sizes of freezers.

Everything shown in the illustration, with the exception of the freezer, is furnished with the outfit—including clamps to fasten to the floor or table, screws and one belt.



Starter for Small A.C. Motors

Electrical Merchandising, May, 1922

The Monitor Controller Company, Baltimore, Md., has recently developed a thermal-limit starter designed to allow an induction motor to exert six or seven times its normal power for a limited period, and at the same time protect it from a prolonged overload as small as 25 per cent. The manufacturer explains that the device automatically takes care of changes in temperature so as to protect the motor under all conditions of operation.

This new "Thermaload Starter" consists of a standard Monitor type three-pole magnetic contactor and a thermal-limit relay. The two devices are mounted on a slate panel and inclosed in a metal cabinet which may be locked or sealed. The starter is of the remote-control type and is operated by push buttons from one or more points. It gives overload and low-voltage protection, prevents damage from single-phase running of polyphase motors, and yet gives a full-current, full-voltage, full-torque start. It is available in all sizes up to 3 hp., 110 volts single-phase; 5 hp., 220 volts single-phase, 110 volts polyphase; 10 hp., 440 volts single-phase, 220 volts polyphase. All sizes are available in voltages up to and including 550 volts.

The starter is complete and ready for connection to the circuits. There are no extra parts to be installed at the time the wiring connections are made.

Stereopticon with Slide Carrier and Ejector

Electrical Merchandising, May, 1922

A new slide carrier and ejector for facilitating the insertion of lantern slides are the features of the new "Model T" stereopticon offered by the DeVry Corporation, 1250 Marianna Street, Chicago, Ill. The slide carrier holds two standard-size slides, one in position for being shown on the screen, the other above it ready to drop into position. To eject the lower slide, a turn-button is given one turn—and the lower slide drops into a felt-lined receptacle while the upper one falls into place

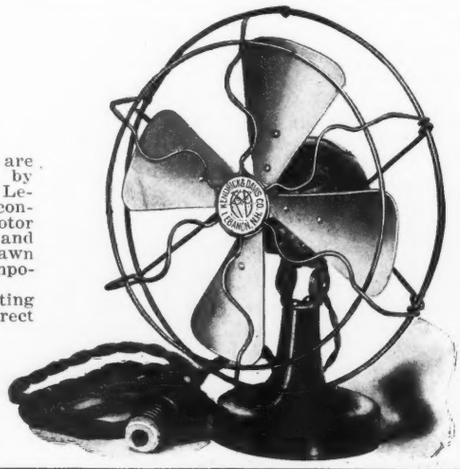
This stereopticon is no bigger than a box camera, and operates on direct or alternating current with a 110-volt, 400-watt lamp.

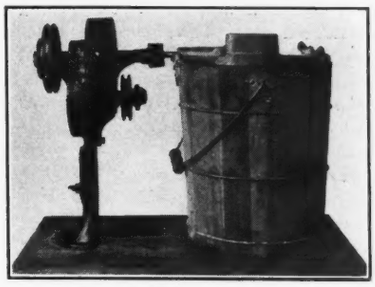
Electric Fan

Electrical Merchandising, May, 1922

Three fan speeds and an off-switch are features of the electric fan made by the Kendrick & Davis Company, Lebanon, N. H. Other points in its construction are: phosphor bronze motor bearings; oil cups with wicks and springs; twenty-segment, hand-drawn copper commutator; brass and composition screw-type brush holders.

It is an 8-in., universal fan operating on 110-125 volts, alternating or direct current.





Power Converting Gear

Electrical Merchandising, May, 1922

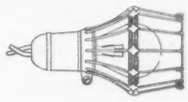
Essentially a geared countershaft which transmits a variety of speeds, the new "Jiffy Jack" manufactured by the Milton Machine Works, East Broadway, Milton, Pa., was invented primarily for household use, where it finds innumerable applications. With its use, the ordinary motors such as are found on electric washing machines can be made to perform many other tasks around the home.

The device is operated either by an individual motor mounted on its own base, or by one already mounted The driving mechanism is a chain of gearing mounted on an adjustable frame. Any washing machine motor having a belt drive can be used to drive it.

Lamp Guard

Electrical Merchandising, May, 1922

Two new "Matthews Holdfast" lamp guards have just been placed on the market by W. N. Matthews & Brothers, St. Louis, Mo., to guard the new mill-type 25 and 50-watt Mazda lamps which are now being put out.



Three-Heat Heating Pad

Electrical Merchandising, May, 1922

The Northern Electric Company, 224 North Sheldon Street, Chicago, Ill., has placed on the market an electric heating pad provided with a three-heat switch by means of which low, medium and high heats are obtained.

An automatic thermostat which regulates and controls the heat acts as a safeguard from overheating. The pad is equipped with a cover of soft eiderdown and a white washable slip.

Electric Motor for Instruction Purposes

Electrical Merchandising, May, 1922

Gray Brothers, Plano, Ill., have placed on the market an electric motor designed for the purpose of instructing anyone interested in electrical things in the general fundamentals of small motor construction. The motor is assembled at the factory but is not wound. A lesson sheet is shipped with each motor illustrating the method of wiring and the function of each part of the machine. The motor forms an integral part of an electrical outfit, designed for instructive purposes, which this company is marketing. The rest of the outfit consists of an assortment of electrical tools which are manufactured by other concerns and assembled by Gray Brothers.

Shell-type Filament Transformers

Electrical Merchandising, May, 1922

A new line of shell-type filament transformers has been brought out by the Thordarson Electric Manufacturing Company, 501 South Jefferson Street, Chicago, having both primary and secondary winding assembled on the center core. The secondary is made of heavy copper ribbon and wound in pancake form. The tap is brought out at center point. These transformers are supplied unmounted or mounted in a heavy durable frame for 110 volts. They are supplied in 80, 150, or 300 watt capacities, with corresponding secondary voltages of 8½, 12 and 12.

Hair Waver

Electrical Merchandising, May, 1922

An electric hair waver for either alternating or direct current at 110 volts has been placed on the market by the J. A. Mariner Corporation, 130 West Forty-second Street, New York City. The original heating of the appliance requires three to four minutes, and it should be used immediately thereafter. The spiral guiding groove surrounding the tapered rod assists in heating each strand evenly as the hair is heated directly from three sides. Wrapping the strand tightly in the groove accentuates the wave, producing a marcel effect. Cord, attachment plug and handle plug are furnished with the waver, and when the device has become heated, the terminal plug which is inserted in the handle may be disconnected.

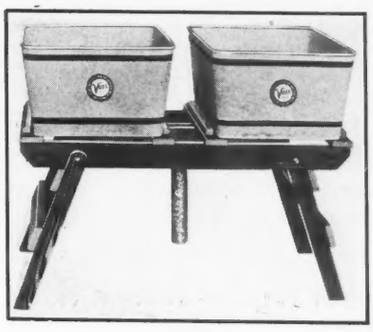
Self-Draining Tubs and Bench

Electrical Merchandising, May, 1922

For owners of swinging wringer washers, who do not have stationary tubs, the Voss Brothers Manufacturing Company, Davenport, Iowa, is offering self-draining tubs and bench which, when not in use, fold up. Both may be put in a corner or out-of-the-way place when not in use.

The bench is constructed of wood, firmly braced, with legs which fold into the frame when not in use. Rubber plugs fit in the drain of each tub. If the bench is set over the floor drain during the washing, it is necessary only to pull the plugs, and the water drains directly from the tubs into the floor drain.

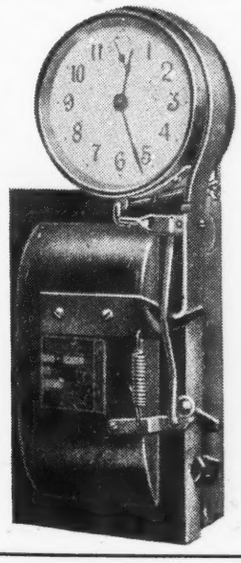
A permanent drain runs from the center of each tub to the center of the bench, where it connects with the removable drain.



Hot Plate

Electrical Merchandising, May, 1922

A hot plate measuring 7½ in. wide and 4 in. high has been placed on the market by the Liberty Gauge & Instrument Company, 6545 Carnegie Avenue, Cleveland, Ohio. It is designed for use on 110-volt circuits and consumes approximately 400 watts. Thirty-eight inches of coiled heating element are supplied with the device and this long heating element gives a large radiating surface. Joints are made tight, clean and sanitary and all sharp corners have been eliminated; three strong legs which will not injure delicate surfaces are provided. The hot plate is finished in nickel plate.



Electric Switch Clock

Electrical Merchandising, May, 1922

For automatically controlling lights wherever needed, such as in signs, windows, poultry houses, and so on, a new "Safety" electric switch clock is being offered by Tillery's Little Janitor Clock Company, 164 Market Street, Newark, N. J. The switch is externally operated, and the box has knockouts in the ends, sides and back. The illustration shows it in the "on" position.

Heating Appliance Switch Plug

Electrical Merchandising, May, 1922

The "Plugall" switch plug No. 705 is a new switch plug made by the Magnus Electric Company of 115 Broad Street, New York Ctiy, which will fit practically all makes of heating appliances. The contacts are the same as used on the "Plugall" plug, fitting either flat or round terminals.

Red and black buttons indicating when current is on or off are of high heat-resisting composition.

Electric Iron

Electrical Merchandising, May, 1922

A new six-pound electric iron has just been brought out by the Home Service Electric Works, 101 Meadow Street, New Haven, Conn. It operates on 110 volts, and is called the "Service" iron.

Continued on third and fourth pages following, for your convenience in clipping and filing. Each item will fit a 3 x 5 in. standard filing card.

The Monroe Lamp & Equipment Corporation, electrical jobber, located at 314 West Fourteenth Street, New York City, announces that its reorganization which was started a year ago is now complete. Instead of handling Packard Mazda lamps exclusively, the company is now conducting a general jobbing business representing the National Metal Molding Company, Thomas & Betts, Indiana Insulated Wire Company, R. B. Corey Company, Edwards & Company, W. A. Bonnell, Garland Manufacturing Company, Emerson fans, Economy fuses and Duplexalites. J. J. Hagan, vice-president of the company for a number of years, has resigned to take up his duties as assistant commissioner of public works. Charles W. Culkin still remains as president and J. M. McCunn as treasurer. M. J. Egan who for twenty years was connected with F. W. L. Fullerton, Inc., Stanley & Patterson and the Western Electric Company, has been appointed to the sales force of the company.

C. L. Rayborn, formerly with Landers, Frary & Clark of New Britain, Conn., has joined the sales staff of the Korsmeyer Company of Lincoln, Neb. Mr. Rayborn is thoroughly experienced in the electric heating device field, in which line, together with that of the household appliance, he will continue in his new association.

A. E. Kelly, electrical contractor-dealer of La Crosse, Wis., whose shop was located at 400-402 Main Street, has recently discontinued business at this location to open up an electrical department in the William Doerflinger Department Store, La Crosse, Wis.

The Electric Supply & Equipment Company, Inc., jobber 1270 Broadway, New York City, with warehouses at Albany, N. Y., Hartford, Conn., Scranton, Pa., and Reading Pa., opened another branch house at Elmira, N. Y., about April first. "We have leased for a term of years, a three-story warehouse on Church Street of this city, and alterations are now being made," explains J. O. Morris, vice-president and general manager of the Electric Supply company.

Donald B. White, formerly assistant sales manager, at Reading, Pa., has been appointed sales manager of the new house. W. A. Griswold from the Reading sales force has been appointed asst. sales manager. This house will cover northern Pennsylvania, and southern and western New York. J. A. Cafferty who is now traveling part of this territory from Scranton, will be transferred to Elmira, N. Y., and additional salesmen taken on. This step is in confirmation with the company's policy of opening one new branch each year. Last year, on account of the financial depression, no house was opened.

The Ramey Manufacturing Company of Columbus, Ohio, manufacturer of the Rayvac electric vacuum cleaner, furnaces and specialties, has taken a long-time lease, beginning March 1, on a five-story factory building at 8-14 East Livingston Avenue. The building, which contains approximately 22,000 sq.ft. of floor space, is now being remodeled to accommodate the Ramey factory. E. J. Ramey is president of the company.

J. D. A. Cross, for twenty-six years connected with the sales organization of the General Electric Company and the Edison Electric Appliance Company, has been elected vice-president in charge of sales for the Rutenber Electric Company of Marion, Ind., manufacturers of "Marion" electric cooking and heating appliances. Incorporated in the announcement of Mr. Cross' appointment is the statement by the company that the trade name "Marion" has been adopted and will be applied to all Rutenber appliances. Says the announcement: "Our slogan, 'Marion means business in 1922,' expresses our ideal in a few words. We mean to go out and create business and to direct that business through the regular trade channels."

Bycroft Brothers, electrical engineers, of Victoria Street, Cambridge, New Zealand, ask to receive catalogs from manufacturers of alternating current motors, 400 volt, 50 cycle 3 phase; fractional hp. motors, single phase household electrical appliances; and electrical fittings.

The Collins Electric Company, electrical supply jobber, has taken over the business formerly conducted by the Iowa Electrical Supply Company at 203-205-207 Grand Avenue, Des Moines, Iowa. John Collins is president of the company and Edward T. Collins secretary and treasurer.

The Reliable Electric Motor Company of New York City has recently entered the jobbing field. Headquarters of the company are located at 165 Grand Street.

Power and Light Dealers Attend New York Conclave

Here are the Western Electric power and light dealers of the New York division who attended the annual conclave at New York City in February. In addition to the discussion of workable plans for increasing farm plant business, the delegates were treated to a comedy drama entitled "The Way of a Go-Getter," written and produced by members of the Western Electric power and light department. Walter Koch, Louis J. Olds, C. S. Frost and J. M. O'Donnell served on the committee on arrangements and the speakers included Harry L. Grant, general appliance sales manager, Leo Dunn, eastern district manager, and Walter J. Drury, New York sales manager of the Western Electric Company. Looks like lighter days for farmers!

The Appleton Electric Company of Chicago, manufacturer of conduit fittings, announces that it has taken over the business of the Anderson Electric & Equipment Company, Chicago, manufacturers of "Auto Reelites," "Reelites" and other products, the manufacture of which will be continued by the Appleton Company, in addition to its own regular line of conduit fittings.

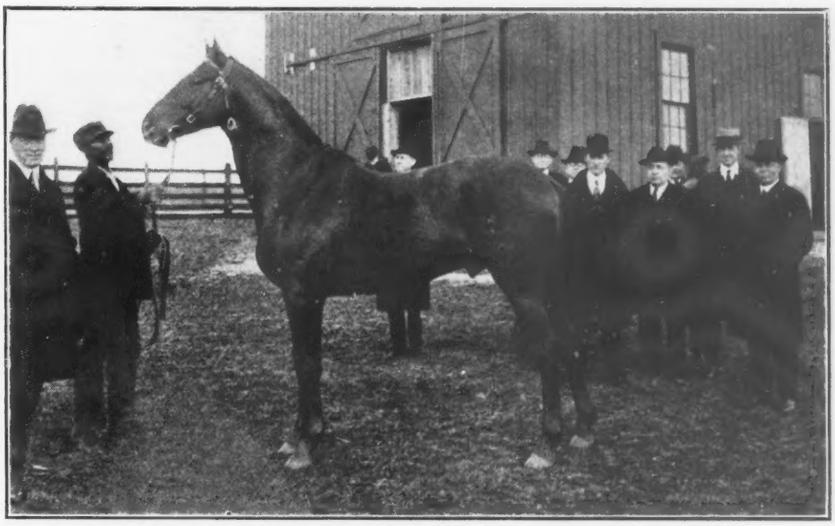
G. B. Richardson, formerly commercial manager for the Texas Power & Light Company at Waco, Tex., has been appointed sales manager of that company, with headquarters at Dallas. Mr. Richardson, who began his career with the Texas Power & Light Company in Palestine, Tex., in 1916, has had much success in the merchandise business in Waco. He served as chief clerk in Waco, then as office manager, and after much success in these two positions, was appointed commercial manager, in which capacity Mr. Richardson came face to face with all phases of the electrical business.

R. W. Everson, formerly manager of the merchandising department of the Westinghouse Electric International Company, has left for Mexico City where he has been assigned to the Mexican office of the Westinghouse Electric International Company. Mr. Everson has been connected with Westinghouse interests for the past twenty-five years. For several years he had charge of the export activities in the supply department and in 1906 he was transferred to the Chicago district office of the Westinghouse Electric & Manufacturing Company, where he specialized on syndicates. In 1919 he was made manager of the merchandising department of the International Company.

A. E. Dyment, president of the Canadian General Electric Company, has been elected president of the Marconi Wireless Telegraph Company, of Canada.

The Carmean Electric Company of Kansas City, Mo., manufacturer of electric heaters and heating systems, has appointed Pacific Coast distributers to handle its products in that section of the country. The California Electric Heating Company, with offices and salesrooms in San Francisco and Los Angeles, will handle distribution in the states of California, Arizona, Nevada and Utah, while the Goodman Electric Company of Tacoma, Wash., has established salesrooms and offices in Portland and Seattle, and will be distributer in the states of Washington and Oregon for the Carmean products.

N. I. Allen, for the past ten years connected with the Western Electric Company, has resigned as sales manager of its Providence branch and is now associated with W. A. Huse & Son, of 128 Empire Street, Providence, R. I., assuming charge of the lighting and household appliance departments of that company.



If there's anybody here who doesn't know Man o' War's record we'll tell them that out of twenty-one starts this handsome thoroughbred scored twenty firsts and one second place. Up to Nov. 5, 1921, he had won $244,465 in prizes. Man o' War has done his mile in 1:35⅘—approximately 37½ miles an hour. Among his admirers in the picture you will find Bill Goodwin; C. K. Morrell of Frazer & Morrell, Lexington, Ky.; R. E. Anderson, Brock-Anderson Company, Lexington; L. J. Milnor, Milnor Electric Company, Cincinnati, Ohio; B. F. D. Allen, Allen Electric Company, Lexington, Ky.; L. E. Trotter and O. H. Hatters Post, Glover Electric Company, Cincinnati, Ohio; Kelley Reed, Lexington Utilities Company; F. D. Van Winkle, Post Glover Electric Company, Cincinnati, Ohio. Wonder how Man o' War picked out Bill Goodwin.

The H-G Manufacturing Company, St. Louis, Mo., manufacturer of electric motors and apparatus, announces a change in name to that of the Galvin Electric Manufacturing Company. An announcement issued by the company explains that this is not a reorganization, merely a change in name and does not alter in any way the ownership, control, management, policies or personnel of the company.

Ralph M. Sitterley announces the establishment of offices at 149 Broadway, Singer Building, New York City, where he will act as foreign sales manager for American manufacturers of electrical specialties, marine supplies, and automotive products and equipment.

The Acme Lighting Fixture Company, manufacturer of lighting equipment, announces that the capital stock of the company has been increased from $30,000 to $75,000. The new address of the company is 107-109 West Thirteenth Street, New York City.

The Utility Compressor Company of Adrian, Mich., manufacturer of electric refrigerators, compressor and vacuum pumps, announces that it has removed to a new factory site. The company's new address is Box 156, Adrian, Mich.

The Olney Manufacturing Company of Lima, Ohio, has been incorporated with a capital stock of $10,000 to manufacture automobile-lamp shades and electrical fixtures. The incorporators are Oscar C. Olney, Gustav Hertzler, Clarence L. Downhour, Calvin D. Gottfried and John G. Schmeisal. The offices of the company are located at 502 American Bank Building.

The Midwest Chandelier Company of Kansas City, Mo., issued to the trade its new catalog, No. 10.

The J. O. Morris Company of 1270 Broadway, New York City, manufacturers' agent, announces the appointment of R. M. Pateracki, as sales manager for the company. Mr. Pateracki for several years has handled the New York sales work for the V. V. Fittings Company of Philadelphia. In his new connection, Mr. Pateracki will be in charge of the sales work on the Barnes self-winding time switch and other electric specialties handled by the J. O. Morris Company.

Henry D. Sears, electrical sales agent, of 80 Boylston Street, Boston, Mass., announces the opening of a sales office in New York City at 342 Madison Avenue, to cover the Metropolitan District. Henry E. Nickerson, for the past eleven years New England representative of the firm, is in charge of the new office.

The Bleadon-Dun Company, of Chicago, manufacturer of electro-medical apparatus, announces the removal of its New York office to larger quarters at 440 Marbridge Building, in charge of M. H. Sarben, H. Burger and T. J. Voneschen.

Betts & Betts of New York City informs the trade of the following changes in territorial management: Frederick A. Maples has taken over the territory formerly covered by F. R. Ewing in New York State, west of Buffalo; Pennsylvania, west of Altoona; West Virginia, Ohio, Kentucky, eastern Indiana and eastern Michigan. His headquarters, for the time being, are at Cleveland. J. E. Eldridge is handling the territory formerly covered by H. E. Bugden, consisting of the New England states. Mr. Eldridge will make his permanent headquarters at Hartford, Conn.

Novelty Lamps

Electrical Merchandising, May, 1922

The Central Metal Crafts Company, 633 North Kedzie Avenue, Chicago, Ill., has placed on the market several types of lamps, one of which, a combination picture frame and lamp, is made of white metal finished in old gold, old ivory or statuary bronze. It is 9¾ in. high, with a base 3¾ in. wide and will take any standard sized lamp.

Another lamp, shaped like a candle rising out of a shoe, is equipped with a miniature flame lamp, made of white metal finished in old ivory and gold and old ivory with a painted buckle. It stands 8¾ in. high and is provided with a base 5¾ in. wide.

The third type, a boudoir lamp, is made of white metal finished in old ivory, old gold and statuary bronze. It measures 7½ in. high with a base 4 in. by 3 in. All types are furnished complete with six ft. of cord and attachment plug.

Sheet Metal Hickey

Electrical Merchandising, May, 1922

The Arrow Tool & Manufacturing Company, 200 Cannon Street, Bridgeport, Conn., has placed on the market a hickey made of sheet metal which will take the place of the cast iron hickey now being manufactured and marketed by this same company. The new design is lighter than the old model.

Electric Scissors Grinder

Electrical Merchandising, May, 1922

The "Accurate" shear serrating grinder, a motor-driven device for grinding shears, has been placed on the market by the Accurate Tool Works of Erie, Pa., and the manufacturer states that it will given even and perfect serrations clear out to the ends of the blades instead of rough and uneven ones resulting from hand filing.

Filing the blades by hand after the temper has been taken out leaves the edges soft (which is necessary for filing) and will not, it is asserted, allow the blades to cut clean or give satisfactory service. Such blades break the hair instead of cutting it, causing the hair to fly in the barber's face.

The use of this machine makes it unnecessary, it is said, to remove the temper from the blades, and gives longer life to the shears. No mechanical experience is required to operate it. It is driven by a universal motor, and is equipped with emery wheels and one diamond dressing tool.

Appliance Cord with Spring Coiler

Electrical Merchandising, May, 1922

The Cutler-Hammer Manufacturing Company of Milwaukee, has put out an electric appliance cord complete with three convenient accessories.

One of these is the spring coiler which prevents the cord from dragging on the ironing board and tangling up with the ironing. This allows free movement of the iron from one end of the board to the other, taking up the slack as demanded.

In addition, each cord is provided with a "70-50" switch for the convenient control of the current and third, the new steel-clad "Dreadnaught" cap is furnished with the attachment plug to guard against the delays which are often occasioned by the breaking of caps when accidentally dropped. The connector fits all appliances. The complete cord is listed as Catalog No. 7220.

Combination Smoker's Lamp and Incense Burner

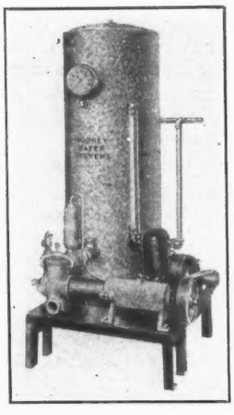
Electrical Merchandising, May, 1922

R. M. Retherford, 109-111 North High Street, Muncie, Ind., has placed on the market a combination lamp and incense burner with an ash tray and match box attached. The unit is made of cast metal, finished in lotus bronze, and stands 12 in. high. It will take any standard lamp and is furnished complete with a shade, 6 ft. of cord and an attachment plug.

Roto-Reciprocating Shallow-Well Pumps

Electrical Merchandising, May, 1922

The "Rooney" roto-reciprocating pumps, made by the Rooney Pump & Transmission Company, Inc., 57 Warren Street, New York City, are manufactured under basic patents which cover the changing of high-speed rotary motion into a low-speed reciprocating motion. This is accomplished by means of a rotating cylinder inside of which has been cut two sets of threads, a right-hand and a left-hand thread. A toothed cam is fastened to the pump shaft and the tooth of this cam fits into the thread grooves of the cylinder in such a way that as the cylinder is revolved the pump shaft is screwed in for the suction stroke and then the cam tooth engages with the thread grooves of the opposite direction and the pump shaft is thus screwed out for the discharge stroke.



The pumps, therefore, accomplish by the two parts—the rotating cylinder and the cam on the pump shaft—the same work as is accomplished in other pumps by the use of several gears, crankshaft, pitman rods, etc.

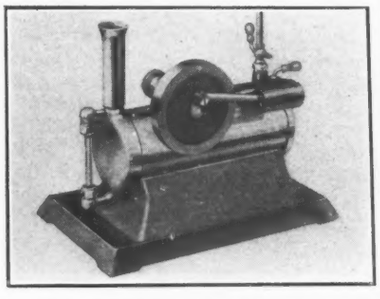
For general use, as providing water for home water supplies, filling tanks, etc., 150 gal. of water an hour, against a pressure of 55 lb. a square inch or a corresponding total head of about 125 feet has been estimated as ample pump capacity. The "Rooney" Type A will fill this requirement, when operated at its minimum speed of 500 r.p.m. A ¼ hp. electric motor will furnish ample power.

Electric Toy Steam Engine

Electrical Merchandising, May, 1922

The new horizontal toy steam engines offered by the Empire Transformer Company, 2000 Southport Avenue, Chicago, Ill., develop ½ hp. Each is equipped with safety valve, whistle, glass water gage, driving pulley, flywheel and finished in bright red enamel and nickel trimmings.

They will run a minature shop of ten pieces and, hitched to a small dynamo, will light miniature bulbs.



Lighting Generator for Motor Boats

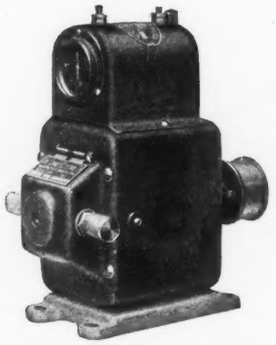
Electrical Merchandising, May, 1922

The marine lighting generator made by the Comet Electric Company, 1237 St. Paul Street, Indianapolis, Ind., is particularly adapted for use on small motor boats. The generator is of rectangular form, as this shape takes less boat space and allows greater room for windings. The entire field frame is made of special electric iron.

Field windings are carefully wound, taped, and thoroughly baked before being assembled in the machine.

Mounted on the generator illustrated is the "MS control," an attachment designed to meet the demands of the open motor boat owner. It forms a complete unit consisting of the generator, reverse current relay and switchboard, combined in the smallest possible space.

Sizes range from the small "M-65," and "T-65," operating at 6-8 volts and 5 amp., to "M-1215" and "T-1215" operating at 12-16 volts, 15 amp. For larger capacities the company supplies a DC 30-40 volt generator.



Storage Battery Indicator

Electrical Merchandising, May, 1922

To determine the condition of a storage battery, the "Cell-O-Meter," marketed by the Edward A. Cassidy Company, 25 West Forty-third Street, New York City, is designed to fit the ammeter hole in the instrument board of a car. The same wires that connect the ammeter are used to connect the "Cell-O-Meter," one ground wire being the only extra connection. It functions as an ammeter until the button is pressed, then it becomes an instantly readable battery indicator, telling the exact electrical condition of the battery.

Embodying two distinct instruments, the device has a two-part dial. On the left side is the ordinary ammeter reading. On the right, under the heading "Battery Condition," the reading is divided into three sections, the red denoting that the battery is in bad condition and should not be used; the yellow that the battery it at least half capacity

and safe to run with, and the green showing that it is fully charged.

These instruments are made in flange and flush types and are finished in black or nickel.

Fading Cabinet for Color Testing

Electrical Merchandising, May, 1922

The "Uviarc fading cabinet," a new product of the Cooper-Hewitt Electric Company, Hoboken, N. J., is an apparatus for testing the permanency of colors produced by dyes or pigments by utilizing the enormously accelerated fading action produced by the high intensity ultra-violet rays given out by the "Uviarc," which is the trade name of the quartz mercury vapor lamp.

The cabinet is a neat, self-contained apparatus, in which a number of samples of the colored article to be tested can be simultaneously exposed to the direct action of the ultra-violet radiations from the "Uviarc" lamp, the necessary auxiliary equipment for regulating and maintaining the lamp in operation being mounted on the supporting base. A portion of the sample is screened from the "Uviarc" rays, thus showing the fading action by comparison with the exposed part. The fading by natural light taking place in weeks or months, or even years, may be produced in hours or days.

In all manufactures in which color is an essential element, the "Uviarc" affords an invaluable means of proving their stability before they are put into the hands of the public. It likewise affords a quick method for the merchant to test goods before purchasing.

Footlight Reflector for Show Windows

Electrical Merchandising, May, 1922

To strengthen show window merchandising by tying-up the firm name with the merchandise displayed, the "Viking" footlight reflector sign has been developed by the Viking Sign Company, 422 West Forty-second Street, New York City. The firm name is in "Viking" raised pressed glass letters brilliantly illuminated by the same baseboard lights that light the window.

The reflector box is made of either heavy sheet iron, brass or bronze, reflecting the full force of lights over a 90 deg. angle from the bottom of the show window up. It is finished in either bronze, brass or antique iron.

Electric Drill

Electrical Merchandising, May, 1922

Because of its compactness and neat housing and finish, the new "Jones" electric drill, besides appealing to the mechanic, may be a useful addition to the tool chest of the man of the house and the home tinkerer, who will find all sorts of uses for it about the house in drilling holes, grinding, sharpening, burnishing, etc.

This device makes a ¼-in drill. Its motor operates on either direct or alternating current, has a diameter of 3 in., and is housed in aluminum with a black finish. The device as a whole is 10 in. long, and is had complete with cord, plug and switch. The Consolidated Instrument Company of America, Inc., 41 East Forty-second Street, New York City, is the manufacturer.

Toggle with Luminous Insert

Electrical Merchandising, May, 1922

The new toggle switches offered by the Arrow Electric Company of Hartford, Conn., may be had with luminous inserts, to enable them to be found easily in the dark. "Undark" is the radium luminous material used.

Adjustable Lighting Fixture

Electrical Merchandising, May, 1922

In order to provide better lighting in mills, shops and factories, and to concentrate the light on a certain spot, the Will-Burt Company, Orrville, Ohio, has placed on the market an adjustable lighting fixture. This unit is simple in construction and instantly adjustable to any position; it may be attached in a few minutes and when in position may be used at any angle to throw light on the piece of work from the top, side or bottom. A single screw controls the lengthening or shortening of the rod and a flexible joint is provided which, the manufacturer claims, renders the joint and the rod practically wear proof.

Outdoor Lantern

Electrical Merchandising, May, 1922

A new electric outdoor lantern, No. C 485, offered by the Friedly-Voshardt Company, 733 South Halsted Street, Chicago, Ill., is the bracket type, with a globe supported on a long slender base. The lantern is 15½ in. high and projects 9 in. from the wall.

Radio Amplifier

Electrical Merchandising, May, 1922

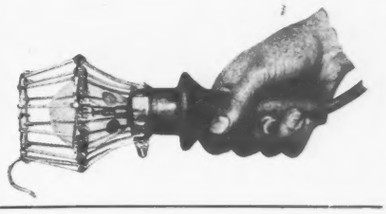
In designing its new "Am-Pli-Tone" radio amplifier, the King Am-Pli-Tone Company, 82 Church Street, New York City, aimed especially to eliminate the metallic, or "tinny" tone of many similar loud speakers. To this end, no sheet metal is used in the construction, and the device has a cast aluminum body and a nickel plated base and horn.

Portable Lamp with Guard

Electrical Merchandising, May, 1922

The new handy "Holdfast" portable lamp offered by W. N. Matthews & Brothers, St. Louis, Mo., is a combination of a specially designed No. MT-14 guard with a hook and a hardwood handle. It is so designed that when assembled with the guard it provides three points of contact on the floor, making it practically impossible to break the handle by stepping on it.

The handle completely covers and protects the lamp socket. All contacts can be reached by loosening the set screw on the collar of the guard. This portable is designed to take the new mill-type 25 and 50-watt Mazda lamp with a P-19 bulb.



Continued on third and fourth pages following, for your convenience in clipping and filing. Each item will fit a 3 x 5 in. standard filing card.

The Atlas Lighting Fixture Company, electrical jobbers, Cleveland, Ohio, has moved into larger quarters, in the heart of the jobbing center, at 1967 East Fifty-seventh Street. The company announces that its new catalog is now ready for distribution.

The Omnigraph Manufacturing Company of New York City, manufacturers of radio apparatus, is now located in new and larger offices at 16-22 Hudson Street, in the Hudson-Reade Building.

R. L. Rathbone, formerly manager of the Cleveland office of the Westinghouse company will take up special duties in connection with merchandising matters, with headquarters in Cleveland.

J. Andrews, Jr., formerly manager of the industrial division, Pittsburgh office of the Westinghouse Electric & Manufacturing Company, has been appointed manager of the company's Cleveland office. C. D. Taylor succeeds Mr. Andrews in the Pittsburgh office.

R. Seybold of the Westinghouse Electric & Manufacturing Company, has been appointed manager of price statistics, and among other duties, will act as secretary of the Domestic Sales Committee, also assisting W. S. Rugg, assistant to the vice-president, in general duties connected with the vice-president's office.

William Murdock has resigned his position as manager of the Maritime Province branch of the Northern Electric Company, Halifax, N. S., with which company Mr. Murdock has been associated for the past twenty-five years. During this time he had wide experience in manufacturing, installation and sale of all kinds of telephone fire alarms, power apparatus and electrical supplies. Mr. Murdock intends to continue in the electrical industry, but at this writing has not announced his plans for the future.

L. S. Montgomery is now associated with the New York organization of the Garland Manufacturing Company of Pittsburgh, successor to the Safety-Armorite Conduit Company. Mr. Montgomery has a sales experience covering many years in the electrical conduit field. The New York office of the company is located at 509-511 West Twenty-seventh Street.

The National Carbon Company has consolidated the sales organizations of Columbia batteries and Eveready flashlights, with the headquarters of the consolidated sales organization at Long Island City, N. Y. General offices and five large sales offices and warehouses under experienced managers will be maintained, at Atlanta, Chicago, Cleveland, Kansas City, and Long Island City. J. R. Crawford becomes general sales manager, Emmet K. Moore, assistant general sales manager, while F. Wilson-Lawrenson takes charge of publicity and sales promotion.

The Brewer Auto Electric Company of Vincennes, Ind., has been incorporated with a capital stock of $25,000 to deal in electrical equipment. H. L. Brewer, G. W. and E. R. Purcell are the incorporators.

Harry A. Bell has opened a New York office at 1400 Broadway to handle the distribution of P. A. Geier products in the Metropolitan New York district.

Henry W. Spahn, formerly New York district sales manager for the Square D Company, has been appointed sales manager of the Metropolitan Device Corporation of Brooklyn, N. Y.

What the gasoline auxiliary is to the sail boat, a pocket note book is to the memory system. Here's F. W. Loomis, well known electrical publicity man, getting ready to recognize Mr. Addison Sims of Seattle.

David C. Rosetahl has opened an office at 954 Hoe Avenue, New York City, as a sales specialist. For the past fifteen years Mr. Rosetahl has made a special study of planning sales campaigns for lamp and fixture concerns, having represented such well-known concerns as Sterling Bronze Company, J. B. McCoy & Company, Samson Bronze Works, X-Ray Reflector Company, B. & K. Manufacturing Company and the Cook Art Illuminating Products Corporation.

The Standard Lighting Fixture & Lamp Company is the new name of the business formerly conducted by the Standard Art Glass Company. The company, whose headquarters are located at 273 Lafayette Street, corner of Prince Street, New York City, has also taken over the manufacture of lighting fixtures, for which purpose the factory at the above address has been enlarged. Louis F. Richmond is head of the company.

P. G. McConnell has resigned as department head with the Belden Manufacturing Company to enter the field for himself. Mr. McConnell's new company, which is known as the McConnell Cable & Specialty Company, of 426 South Clinton Street, Chicago, will specialize in the manufacture of automobile timer-set attachments and special cords and connectors.

Vincent G. Stark, New England manager for the Duplex Lighting Works of the General Electric Company, has resigned his position with this company to become associated with the Mitchell-Vance Company, fixture manufacturers of New York City.

The Reliance Lighting Fixture Corporation of New York City, manufacturer and designer of lighting fixtures and fixture parts, announces its removal to new and larger quarters at 443-445 Greenwich Street.

The W. P. Jones Electric Company is the name of the electrical business formerly conducted by the W. C. Tewksbury Company at 83 Central Street, Milford, Mass.

Cote Brothers Manufacturing Corporation, manufacturer of the Simplicity refillable fuse, with general offices at 1425 First National Bank Building, Chicago, has established branch offices in New York, Philadelphia, Boston, San Francisco, Cleveland, Tampa and Denver.

C. B. Scott, of Tampa, Fla., proprietor of Scott's Electric Shop, handling electrical supplies, equipment of all kinds, and specialties such as fans, washing machines, etc., has moved to the new Sheppard Building, 217 Main Street at Palmetto. He is using quarter pages in his local paper to attract attention to his new location.

The Connecticut Telephone & Electric Company of Meriden, Conn., announces the following new appointments in its several territories: C. H. Moulton, for New England, at 24 Milk Street, Boston; Charles A. Kirkland, Inc., for the Metropolitan New York District, 39-41 Cortlandt Street, New York City; O. T. Jenkins, for Texas and Oklahoma at 414 Dallas County Bank Building, Dallas, Tex.

The General Lamp & Fixture Company of Pittsburgh, Pa., has recently been incorporated to do a manufacturing and jobbing business in electric lighting fixtures and supplies. The company is also engaged in the radio manufacturing business under the trade name of the General Radio Manufacturing Company. The offices and showrooms are located at 6014 Centre Avenue and the factory on Houston Street, adjoining the building on Centre Avenue. The officers of the company are Frank H. Roseman, president and treasurer; Henry D. Fulton, vice-president; and Arthur C. Mack, secretary. "We believe the field for the radio business is unlimited," says President Roseman. "We have had several business people tell us that the radio business was only a 'fad,' but if one looks into the records of any new industry, he will find that the same public opinion prevailed. The present condition in the radio business," continues Mr. Roseman, "is that the demand is far greater than the production. . . . We honestly believe that it is only a question of time before radio will be one of the foremost industries of the country."

New Retail Electrical Stores

ALABAMA

Birmingham—Cooper Electric Company, 2029 Fifth Avenue North. Incorporators M. L. Cooper and others.

Montgomery—Minto-Kratz Company.

CALIFORNIA

Compton (Los Angeles County)—Compton Electric Specialties Company, 505 North Wilmington Street, new building.

Coronado—Independent Electrical Company, H. C. Van Alstine, proprietor.

Oakland—Home Electric Shop, 1816 Telegraph Avenue.

Riverside—Riverside Electric Company, Charles A. Pooler, proprietor, 916 Main Street, successor to Howard Ross.

San Bernardino—Ennis & Gillette, 424 Fourth Street, successors to Ennis & Carls.

San Diego—George F. Wheelock, 929 E Street.

San Francisco—A. J. O'Brien, 1809 Fillmore Street, successor to R. J. Bennington.

Stockton—Earl B. Newman, 119 North San Joaquin Street, successor to L. W. Sherman.

Torrance—Lyons Electric Company, El Prado Block.

COLORADO

La Junta (Otero County)—Robert Yand, John R. Phillips and John McCoullier, 12 East Second Street, successors to Gardner Electric Company.

Pueblo—Liberty Electric Company, C. W. McNeill and R. C. Surface, proprietors 420 North Santa Fe Avenue.

CONNECTICUT

Hartford—Castonguay Electric Company, 25 Main Street. Old concern, recently incorporated.

New London—Quickservice Electrical Company, Inc., 80 Bank Street; Joseph Friedman, president; J. O. Lebow, vice president; A. J. Levinson, secretary-treasurer.

FLORIDA

Clermont (Lake County)—L. R. Zinsser, Reliance Garage, business formerly conducted by Clermont Electric Light Company.

Miami—Simmons Brothers, Riverside Auto Supply Company, new branch in Central Arcade. Also in business at West Flagler Street.

GEORGIA

Atlanta—Capital Electric Company, 63 Peachtree Street; new name of retail business of Center Electric Company, which formerly conducted wholesale and retail business. Carter Electric Company now handles only wholesale end.

ILLINOIS

Berwyn (Cook County)—Berwyn Electric Shop, 6807 Stanley Avenue; incorporators Frank Nowak and others.

Chicago—Electrical Merchandising Corporation, 106 South Jefferson Street; incorporators A. D. Bernstein and others.

Hartford Electrical Company, 604 East Forty-seventh Street; incorporators Henry A. Satter and others.

Galesburg (Knox County)—Edward Hayes and H. F. Rundle, 65 South Cherry Street, successors to Harry Jacobs.

Lewistown (Fulton County)—Dick Arnett, successor to Albert Mahr.

Pekin (Tazewell County)—O. & W. Electric Company, John Oltman and U. White, proprietors, Fourth and Mary Streets.

Springfield—J. A. Arenz.

INDIANA

Auburn (DeKalb County)—Electric Shop, West Seventh Street, Irving Steininger, proprietor, remodeled shop and installed new show-room.

Bloomingdale (Parke County)—Service Electric Company.

Corydon (Harrison County)—E. G. Miller, successor to Miller and Rosenbarger.

Edinburg (Johnson County)—Pierce Evan & Company; in hardware business, added line of electrical supplies.

Fort Wayne—Indiana Radio Company; incorporators Ralph H. Chadmet and others.

Ligonier (Noble County)—Harry J. Holderness, successor to M. A. Hutchinson.

Muncie—Excel Electric Company; incorporators J. A. Reichart and others.

Reynolds (White County)—L. E. Allen, successor to J. L. Buss. In hardware business; has added line of electrical supplies.

IOWA

Cedar Rapids—A. A. Electric Company, C. E. Gourley, proprietor, 217 South First Street.

Garnavillo (Clayton County)—H. F. Gossman and L. C. Gossman.

KANSAS

Beloit (Mitchell County)—E. D. Collins and W. H. Grover.

Erie (Neosho County)—C. B. Welch.

Fredonia (Wilson County)—Howard Chestnut, Sixth Street.

Hutchinson—J. W. Donovan and Karl Donovan, 5 Sherman Street, East, Agents for Delco and Frigidaire.

Neodesha (Wilson County)—Neodesha Electrical Company, G. I. Bradley and C. H. Brady, proprietors, 116 North Eighth Street.

Scott City (Scott County)—Scott City Electrical Company, Harry Mott, proprietor, successor to Force & Mott.

LOUISIANA

New Orleans—Electrical Contracting & Engineering Company, 518 Gravier Street, added line of electrical fixtures.

Leumas-Levy Electric Company, 535 Carondelet Street.

Stern Company, Inc., Baronne & Canal.

MAINE

Caribou (Aroostook County)—Irad G. Hagerman, U. S. Bailey & Son Building.

Sanford (York County)—Smith Dutton & Company.

MASSACHUSETTS

Brighton—Allston Electric Shop, Herbert W. Smith, proprietor, 165 Brighton Avenue.

Fitchburg—E. A. Bruce Electric Company; incorporators, Robert W. Goswell, president, and others.

Lawrence—The Berwick Service Company. Incorporators, Louis P. Berwick, 9 Ridge Road and others.

Westfield (Hampden County)—Ira S. Rider, Thomas and Mechanic Streets.

MICHIGAN

Detroit—Broadway Radio & Electrical Supply Company, 1306 Broadway Street.

Cabinet Radio Shop, 3433 Woodward Avenue.

Commerce Radiophone Company, 7424 Mackie Street.

Continental Radio Company, 9171 Fort Street, West.

Detroit Radio Company, Rivard & Maple Streets.

Federal Electrical Supply Company, 332 Congress Street.

Federal Radio Company, 531 Fort Street, West.

Medbury Electric Company, 12646 Oakman Boulevard.

Michigan Radio Company, 4612 Woodward Avenue.

Peerless Wireless Company, 4110 Van Dyke Avenue.

Pioneer Radio Works, 3123 Cass Avenue.

Radio Shop, 242 Adams Avenue, West.

Sun Life Battery Company, 8815 Harper Avenue, batteries and electrical appliances.

Super Tone Radio Company, 416 Montcalm Street, East.

United Radio Company, 1332 Broadway Street.

MINNESOTA

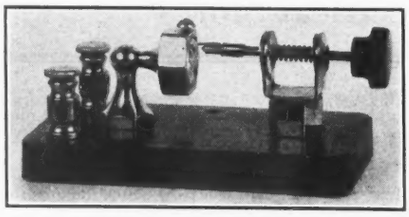
Park Rapids (Hubbard County)—L. H. Rice. Will open about June 1.

If any antiquated straw brooms and ancient dustcloths are to be found in the homes in New York, Brooklyn and Newark at the end of 1922, it will not be the fault of these two hundred and more house-to-house salesmen and retail dealers, who, on March 24, launched a campaign aiming to put the Eureka vacuum cleaner into at least 25,000 homes in the cities named. If it is necessary to ring every door-bell in the three cities these men expect to do it. The campaign was launched by A. L. McCarthy, vice president and general manager of the Eureka Vacuum Cleaner Company; F. J. Saylor, Philadelphia manager for the company; W. W. Wooledge, manager for Brooklyn and Newark; Inkerman Bailey, manager of the New York office; E. S. Goodlisse, retail manager for New York; R. C. Neitman, retail manager for Brooklyn, and E. R. Wilson, manager of the housefurnishings department, Hahne & Company, Newark. A demonstration of the new model "Eureka" followed.

Crystal Radio Detector

Electrical Merchandising, May, 1922

Designed to obtain a high degree of sensitivity through the flexibility of the crystal adjusting mechanism, is the new crystal detector for small radio sets, offered radio amateurs by the Magnus Electric Company, 109 Broad Street, New York City. The device measures about 2½ x 2 in.; the base is of a molded insulating compound, and the terminals and crystal holding parts are nickeled.

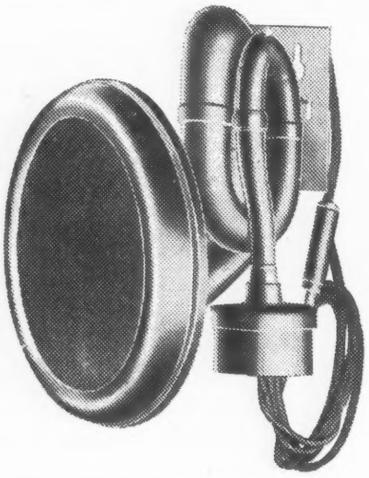


Loud Speaker for Radio Receiving

Electrical Merchandising, May, 1922

A single Baldwin telephone receiver to which is mechanically attached a specially designed metal horn is used in the new "Vocarola" reproducer made by the Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa.

The standard Baldwin mica diaphragm has been replaced by a special metal diaphragm which, the manufacturer explains, will stand practically any amount of abuse without damage. The "Vocarola" is designed to work satisfactorily from a two-stage audio frequency amplifier and, using good amplifying tubes, 150 to 200 volts may be used without damage to the instrument.



Electrical Tester for Automobile Stations

Electrical Merchandising, May, 1922

The Plucker Electrical Products Company, New Britain, Conn., has placed on the market a testing device with which it is possible to locate faults in all makes of electrical systems. Tests can be made on coils, condensers, breaks in insulation, rotors, armatures, horns and numerous other parts. The instrument is compact and simply constructed of the best materials. The base of iron black is enameled while the other metal parts are made of brass and heavily nickel-plated. The interrupter is strongly constructed and made so as to obtain speeds ranging from high to low, allowing tests to be made under same conditions as if the tested part were on the car. The coils, condenser, resistance and other parts are completely housed under the base. A book of instructions with complete wiring diagrams is furnished with the device.

Pressed Steel Switch Box

Electrical Merchandising, May, 1922

The Ward Electric Company, Otis Building, Philadelphia, Pa., has placed on the market a line of pressed steel switch boxes. This beveled-corner loom switch box is made in black enameled finish and may be ganged quite easily by simply removing the sides. The knockouts come out easily and cleanly. The same box is made with two clamps and in addition, a straight-corner 2½-in. box for loom is manufactured. This box is also made with clamps for B X cable.

Small Electric Heater

Electrical Merchandising, May, 1922

The Nardell Corporation, Utica, N. Y., has placed on the market an electric heater, designed for alternating or direct current at 110 volts and 660 watts. The heater has been tested and approved by the Underwriters' Laboratories. The helixes are made of a special alloy and full heat is obtained without operating the resistances at a red heat, therefore tending to lengthen the life of the heating elements. The heater is constructed of a polished blue steel jacket with a full nickel-plated pressed steel top and lower base. Its diameter is 10 in. and its height 18½ in.

Multiple Fuse Plug

Electrical Merchandising, May, 1922

A multiple fuse plug which combines six fuses in one and which indicates which fuse is blown has been placed on the market by the Industrial Engineering Company, 407 East Fort Street, Detroit, Mich. The pointer in the center of the dial, which is connected to a brass contact at the back of the plug, indicates at a glance whether the trouble is due to the fuse. If dead, the fuse section will be blackened; if live, the fuse wire can be seen. In order to change the fuse, it is only necessary to pull out the brass connector, and turn it to the right or left until the pointer indicates a clear fuse.

Student's Key and Buzzer

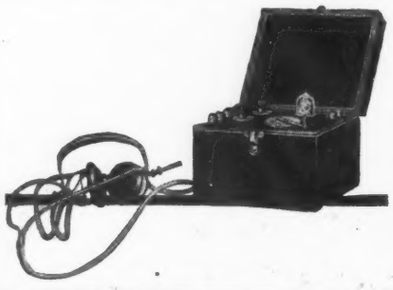
Electrical Merchandising, May, 1922

The Ajax Electric Company, 38 Palmer Street, Cambridge, Mass., has placed on the market a key and buzzer set, designed for those students who are desirous of learning to receive and send wireless signals and messages. This set consists of a solid brass, lever-type key, bakelite knob and high tone-adjustable buzzer, with silver contacts and two adjusting screws on top of the buzzer. A wide range of tone can be had by a very slight turn of the screws. All brass fittings are grained and lacquered.

Regenerative Radio Receiver

Electrical Merchandising, May, 1922

A single-circuit, tube, regenerative receiving set styled "The Aeriola, Sr.", is now being manufactured by the Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa.



The set is contained in a nicely finished wood box with a cover and, as supplied, includes a Brandes head set and special "type WD-11" vacuum tube.

The oscillating circuit is identical with that of the "Aeriola, Jr." set and consists of a mica condenser of two steps, in series with a variometer inductance. The steps of condenser are brought out to two binding posts, the lower capacity being used for wave lengths up to 350 meters, and the higher capacity for wave lengths ranging from 300 to 500 meters. Tuning in between these steps is accomplished by the variometer inductance.

A special tube is furnished with the Aeriola, Sr., the filament of which will operate from a single 1½-volt dry battery. A rheostat takes care of the variation in battery voltage. The tube requires but 22.5 volts plate voltage. It is provided with a special base to preclude the possibility of any one inserting it in a socket intended for a tube of higher voltage.

Radio Headset

Electrical Merchandising, May, 1922

The Manhattan Electrical Supply Company, 17 Park Place, New York City, is now offering a new radio headset in two models, No. 2500 and No. 2501. Headset No. 2500 is super-sensitive, will produce loud signals, and because of the construction of its magnets, is said to produce sound without distortion. This is accomplished by designing the magnets to exert a center pull on the diaphragm, thus flexing it equally in every direction. The magnets are of tungsten steel.

Another feature is the winding of the magnets. In the No. 2501 headset there are 6,800 turns of wire as against 4,400 turns on the No. 2500. There is also a sanitary headband, covered with a rubber japanned finish. The case proper is flush on the back with no projections to scratch furniture, and there are no projections on the headband to catch the hair.

The polarity of the magnets are indicated in the case and a tracer telephone cord is used, so that the receivers may be correctly inserted.

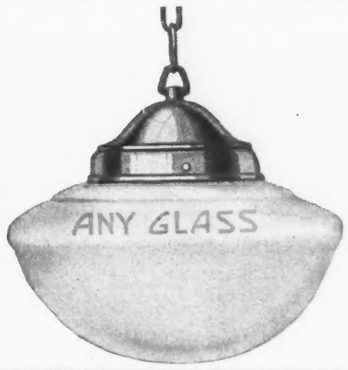
What's new on the market? These pages will tell you.

Outlet Boxes

Electrical Merchandising, May, 1922

The Merrill Company, Ipswich, Mass., has placed on the market outlets especially designed for "old work." When the clamps are in place a metal inclosing opening is provided, with the ends of lathe protected, and there is a generous hole to fish through. With the box (or plate) in place, the fixture support becomes as strong as the lathe and plaster ceiling or wall, no dependence being placed on small wood screws to support the fixture. "Type 54" provides a recess back of the plaster line for the wires and hickey and has a removable fixture stud which affords maximum space for the connectors and to make connections.

This box is particularly designed for supporting "Elexit" fittings.



Hangers for Commercial Lighting Units

Electrical Merchandising, May, 1922

The latest addition to the line of "Red Spot" hangers for commercial lighting units made by the F. W. Wakefield Brass Company of Vermilion, Ohio, is a general purpose hanger. It is made to fit any of the popular urn-shaped glassware and is offered in both ceiling and suspension types.

Electric Bell

Electrical Merchandising, May, 1922

An electric bell for alternating current only and for use on frequencies of not over 60 cycles has been placed on the market by the Schwarze Electric Company, Adrian, Mich. The mechanism of this device is entirely separated from the frame and is suitable for multiple operation only. The manufacturer states that the poles are so arranged that the permanent magnet cannot be destroyed by the electromagnet nor will it weaken under any kind of service. It is provided with a heavy cast-iron frame, inclosing the apparatus and making it weatherproof. It is further tapped for ½-in. conduit and also provided with holes for the entrance of the line wires through the top of the casting. These holes are bushed with insulating bushings. Plugs are furnished to close either conduit or line entrance when not in use. The bell is adapted for fire alarm use in schools and industrial plants.

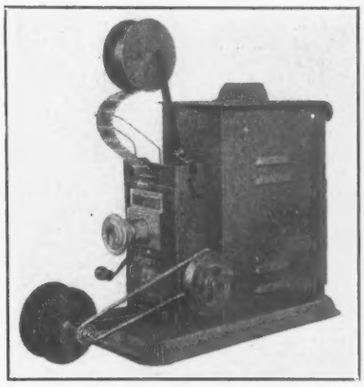
Motion Picture Machine

Electrical Merchandising, May, 1922

Some features of the new household motion picture machine made by the American Pictograph Company, Manchester, N. H., and known as "Kinograph No. 2," are:

Special XX grade lens, framed in nickel lens tube, with focusing device; film reels 3½ in. diameter, with 150 ft. capacity; automatic take-up for rewinding film while machine is in motion. Two reels of standard film, each 75 ft. long, packed in metal container, or 25 ft. non-inflammable (narrow) film, and a table film rewinder, (geared 10 to 1) are furnished with this model. For best results a 100-watt Mazda stereopticon lamp should be used. The machine measures 8 x 17 x 19 in. and weighs 7 lb.

All of the new "Kinograph" models have the following features: Steel construction throughout; standard Geneva movement; socket, cord and plug equipment ready to operate wherever an electric light socket is available.



Sectional Hot Plate

Electrical Merchandising, May, 1922

By means of bolts, two or three of the new sectional hot plates made by the Russell Electric Company, 140 West Austin Avenue, Chicago, may be attached together to make a two or three burner hot plate. Each hot plate itself is 11 in. square and weighs 5 lb.

These hot plates are really designed for all ordinary cooking, because more heat is given than on the ordinary disk stove or grill. Each plate has three independent heating elements, each controlled by a trigger switch and the combined rating being 1,000 watts. Seven heat combinations are possible. Heat can be confined to center, intermediate, or outside parts of the burner, to give most efficient results.

Toy Motor

Electrical Merchandising, May, 1922

Standing only 3½ in. high, the toy motor developed by the Madmar Quality Company, Utica, N. Y., has been designed to give maximum output of power for its size. The armature is built of nineteen laminated iron pieces and wound with wire having a black enamel finish, so as to get on the required amount of wire in the given place. The field coils are wound, formed and taped to give correct results. Each motor is equipped with a reverse switch and pulley, and is finished in red and black enamel. For best operation, it should be used on about 8 volts alternating current from a toy transformer.

Clothes Washer with Porcelain Table Top

Electrical Merchandising, May, 1922

The Federal Electric Company, 8700 South State Street, Chicago, Ill., announces its new 1922 model "Federal" electric washer, termed model "L" on account of its new mechanism, the main point of which is the "link motion."

This "link motion" is designed to eliminate the necessity for complicated gear trains for reduction purposes, and consequently on account of the bearing surfaces, reduces the possibility of mechanical troubles.

A new ball-bearing wringer is another addition to the machine, and the finish also has been changed.

Another important feature of the new washer is the ease with which the wringer can be removed from the machine, leaving a flat top, over which is placed a porcelain enameled table top supplied with the machine.

Toy Floor Lamp

Electrical Merchandising, May, 1922

As part of its line of children's toy furniture, the Grand Rapids Toy Manufacturing Company, Grand Rapids, Mich., is offering a little floor lamp, complete in every detail, with silk shade, socket and plug—but only 30 in. high. The standard and base may be had in mahogany, walnut or enamel.

Electric Cream Separator

Electrical Merchandising, May, 1922

D. M. Burrell & Company, Inc., Little Falls, N. Y., have placed on the market two cream separators of the link-blade type, designed especially for motor drive. The hand machines also have been designed so that they can be easily converted to electric drive. Three extra parts only are needed for converting the drive, these being the motor, drive belt and pulley.

The total height of the new machines is less than 47 in., and the crank is at the standard height of 32 in. from the floor.

File these items on 3 x 5 in. cards every month, to keep your stock index up to date.

New Retail Electrical Stores

(Continued from Page 131)

Winthrop (Sibley County) — William Heinek.

MISSOURI

Kansas City—Kansas City Light & Power Company, 1330 Grand Avenue.

National Electric Supply Company, c/o Seehorn Barnes & Schwartz, Grand Avenue Temple.

Trenton (Grundy County)—Gardner Electric Company, E. M. Gardner and C. W. Skinner, East Ninth Street.

NEBRASKA

Wausa (Knox County)—Harry ElDorado, successor to ElDorado & Johnson.

NEW JERSEY

Boonton (Morris County)—J. W. Estler & Son, 923 Main Street.

Jersey City—Beaver Electric Company, moved to Atlantic Street, corner Jackson Avenue.

Paul H. Jaehnig, Inc., new branch at 368 Hoboken Avenue. Also in business at 109 Bank Street, Newark, N. J.

Newark—Robert Levy, moved to 9 Central Avenue. (radio shop.)

Plainfield—The Meriom Corporation, moved to 125 Watchung Avenue.

Ridgefield Park (Bergen County)—F. A. Bergren, moved to 203 Main Street.

Trenton—Victor L. Rhome, 135 North Broad Street. Temporary address until about May 14, 132 Passaic Street.

NEW YORK

Attica (Wyoming County)—Earl Stroh, Stroh Building.

Brooklyn—State Electric Supply Company, 1457 Flatbush Avenue.

Stein Electric Company, moved to 374-376 Broadway.

E. Morris, 955 Flatbush Avenue.

Herbert Cohn, 1367 Flatbush Avenue, new location.

Hudson (Columbia County)—J. A. Dietz, 11 North Sixth Street, new location.

Hudson Electrical Company, Witham & Yerrick, proprietors.

Jamestown—Jorgenson Plumbing & Heating Company, moved to 39 South Main Street.

Johnson City (Broome County)—John L. Beurket, erecting new business block on Willow Street. Will occupy one of the stores when completed.

Kingston—Joseph Gruberg, moved to 29 Broadway.

New York City—Yorkville Electric Appliance & Supply Company, moved to 149 Bowery.

Spark Electric Corporation; incorporators, J. P. Mottur, 111 Broadway.

Model Gas & Electric Fixtures Company, 175 East 116th Street.

Harry Weiss, corner 38th Street and Lexington Avenue.

Robert E. Leve, moved to 39 West Thirty-second Street.

Seneca Falls—Frank McCarthy.

Syracuse—Myrtle & Cunningham, Inc., 552 South Salina Street, successors to Myrtle-Siegel, Inc.

Utica—Michael E. Hooks, 262 Genesee Street, will remodel shop in new business block recently purchased.

Watertown—Frank E. Hall, 262 Washington Street.

Karl A. Bushnell, 110 Bishop Street.

Floyd A. Bourcy, 734 Danielson Street.

Carl F. Brennan, 344 Keyes Avenue.

"Ye Electric Shoppe" Harold W. Benoit, proprietor, moved to Lansing Building on State Street.

OHIO

Akron—Rogers Radio Company. Incorporators: George D. Rogers, Harry G. Thompson, W. H. Spencer, Thelma Cox and Willard E. Holden.

Amanda (Fairfield County)—L. D. Kissinger and Samuel Marcel.

Bethseda (Belmonte County)—Bethseda Electric Shop, Brown & Kirk, proprietors, successors to R. F. Chappell.

Canton—Thomas-Smith Company; Frank H. Smith, Malcolm M. Cline, Marion M. Smith, Amelia Van Voorhis and Robert N. Everhard.

Cincinnati—Hubert Builders' Materials Company, new branch at 713-715 Main Street. Also in business at 48 Vine Street.

Delco Light Company, 522 Broadway.

Economy Electric Service Company, 4667 Spring Grove Avenue.

Cleveland—Radio Service & Sales Company; incorporators William W. Horner, Ralph E. Bauman, John W. Pearson, F. H. Mason, C. A. Quintrell.

Parker Electric Company, erecting new offices and storerooms at 4502 Prospect Avenue.

Blue Bird Washer Company Williamson Building, Euclid Avenue; incorporators R. Clyde Wheeler and others.

Westinghouse Store, 9700 Euclid Avenue.

Columbus—F. & R. Lazarus & Co., department store, has installed radio department, in charge of T. L. Clipson, expert radio operator.

Superior Radio & Telephone Equipment Company, successors to Electrical Specialty Company, 83 East Long Street, R. C. Garfinkle, general manager. Headquarters also for Columbus Radio Club.

Morehouse-Martens Company, department store, has installed radio department in basement. Also has broad casting station on roof of building. Howard Stark, former owner of Columbus Radio Apparatus Company, is manager of the department.

We've heard that one about the man who installed an electric fan as motive power for his sail boat. But until we received this picture of Samuel Hibben, newly oppointed manager of the illuminating bureau of the Westinghouse Lamp Company, New York, we had never run into the idea of using a tame loon to locomote a canoe by wing-power.

Dayton—Dayton Wireless Shop Company; incorporator, Melvin Lehman and Robert G. Tufts.

Elyria (Lorain County)—Benmor Company, 508 West Street.

Shelby (Richland County)—Electro-Novelty Shop; incorporators, William D. Hood, Arthur F. Johnson, Harley F. Bromball, George Vuelle and R. F. Moore.

Toledo—Luma Radio Company, radio shop; incorporators, E. J. Honywell and others.

Youngstown—Alliance Electric Company, H. R. Dillon and C. E. Dierling.

OKLAHOMA

Enid (Garfield County)—L. Dodd and Roy Kent, 109 East Randolph Street.

OREGON

Portland—Electric Service Company, moved to Park and Yamhill Streets.

PENNSYLVANIA

Ashland (Schuylkill County) — McAndrews Brothers, 111 West Main Street. Bought retail branch store of Schuylkill Electric Company.

Clarion (Clarion County)—Renan C. Baum, Main Street and Eighth Avenue.

Uniontown (Fayette County)—Ambrose Diehl Electric Company, 39 North Gallatin Avenue; also has shop at 124 South Eleventh Street, Philadelphia. Company also in wholesale business.

A. C. Gause, 81 South Gallatin Avenue.

Waynesburg (Greene County)—Paul R. Shondel, moved to Downey Hotel Building.

Williamsport (Lycoming County)—Williamsport Electric Company. Old concern, recently incorporated.

TENNESSEE

Memphis—P. W. Lytle, Monroe and Second Streets, erecting new building at 288 Union Avenue which he will occupy when completed.

TEXAS

Galveston—G. E. Koehler, moved to 2313 Avenue E.

Luling (Caldwell County)—C. Zedler, installed large new display windows.

Marshall (Harrison County)—Howell Electric Company, moved to new location.

Mexia (Limestone County)—Texas Electric Company, Bourne Street.

UTAH

Eureka (Juab County)—Eureka Mercantile Commission Company, Birch and Pritchett, proprietors.

Salt Lake City—Thomas Electric Repair Company, moved to 58 West Second Street.

WASHINGTON

Chehalis (Lewis County)—Enterprise Electric Company. In market for radio equipment.

Ronald (King County)—L. A. Parks, Harries Building. Also in business at Kent.

Seattle — Edison Electric Company, Emanuel Secord, proprietor; wholesale and retail business.

H. E. Gleason Company, erecting new building at Olive and Yale Avenues.

WEST VIRGINIA

Grafton (Taylor County)—Electrical Equipment Company, 57 West Main Street. Also in business at Morgantown.

Kenova (Wayne County)—J. B. Eakin and D. A. Dean, Fink Building.

McMechen (Marshall County)—Holstead West, Baumberger Building.

Wheeling—Stroebel Radio & Electric Company; incorporators, J. C. Stroebel, Sr.; H. L. Stroebel, 419 Richland Avenue, and others.

WISCONSIN

Ashland (Ashland County)—Claude Manly.

Barron (Barron County)—F. E. Lentz, 326-7 Third Street.

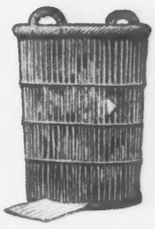
Committee of Editors to Promote Better Retailing

The National Conference of Business Paper Editors has appointed the following editors to co-operate with the Associated Advertising Clubs of the World in the campaign now being carried on to promote better retail selling methods:

Chairman—S. H. Ditchett, *Dry Goods Economist;* Llew Soule, *Hardware Age;* O. H. Caldwell, ELECTRICAL MERCHANDISING; David Beecroft, Class Journal Company; Jay A. Gary, *Grand Rapids Furniture Record.*

Through local advertising clubs, the Associated Advertising Clubs of the World has already organized a number of study courses for retail clerks for the purpose of improving their sales ability, and the work has reached a stage which seems to make it desirable for all parties in any way concerned with the matter to join forces.

The Lighter Sighed



Current Practice in Using the Fish-Mouse

Editor's note:

This is the second of a masterly series of articles on the breeding and operation of the fish-mouse, the indispensable little rodent with a ring in his tail and a very mean diameter, that runs through conduit for wiremen, carrying a lead-in string with him. Professor Fusebox, whom we have retained at great expense to handle this subject for us, brings to his subject a background rich with experience. Professor Fusebox, gentlemen:

Last month I told you how after patient years of experiment in breeding we finally produced the modern fish-mouse.

Today, in the brief space the editor has left to me after his introduction, I shall tell you how the mouse is used.

Two methods are now in vogue: Induction and Repulsion.

In the Induction Method, the lead-in string is made fast to the rodent's tail with two half hitches and a bowline. The rodent is then placed facing the conduit through which the wire is to be pulled, or fished, and an assistant then holds a piece of cheese at the other end of the wire-way.

The Repulsion Method is somewhat faster, and has the advantage of working well with any state of the rodent's appetite. With this method the string is affixed as before, with the mouse facing the conduit opening. A lean, hungry cat is then brought into the room on leash, and the mouse proceeds with celerity.

—FARRINGTON FUSEBOX, E.E.

They Call It "Gowf" in Yonkers

Our lighting man was full of ills,
And doctors tried to treat 'em
But he shook his cawf
By playing gawf,
He'd rather have to swat the pills
Than be compelled to eat 'em.

—PELHAM PETE.

Contributors Fabulously Paid

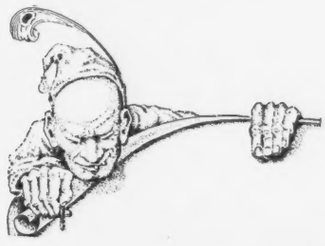
Somebody wrote in the other day and wanted to know how much we pay for contributions to "THE LIGHTER SIGHED."

That's a fair question. Our space rates are as high as those paid by the most famous newspaper columns. Successful contributors to this page will receive just as much for their gems of genius as if they had appeared in "The Sun Dial," or "The Conning Tower," or "A Line o' Type or Two."

And that pay is fame! As we see it, a contributors' page is a sort of club where the good scouts of a common interest can swap ideas.

When a man springs a good story in a club lounge, he is promptly paid—with a hearty laugh.

And the plauditing of the multitude is the priceless reward held out to LIGHTER SIGHED contributors.



An Appeal for Cold Facts.

Most of us here tonight, in the diction of the post-banquet orators, remember Burlington Beezer, whose likeness appears above these lines. For many months Mr. Beezer graced the lighting fixture pages of this journal, and he became far and widely known.

Like every other really great national character, Mr. Beezer has his critics. There have been those who made slighting remarks about his facial—and particularly his dental—characteristics.

In fact some people came right out and wanted to know how he lost so many teeth. Rumors were started, and were rapidly magnified.

Only yesterday a man called us up and said he had it on unimpeachable authority that Beezer—he didn't even call him Mister Beezer—that Beezer lost his incisors stripping insulation off No. 14 weatherproof, one day when he had mislaid his pliers.

Now this just shows how reports spread around. Just as we were going to press, a short, thin electragist insinuated that he once saw Mr. Beezer bite a piece of BX clean in two!

What really did happen to those missing teeth? Frankly, we don't know. But if any of our contributors have any hunches on the subject, we beg of them, in justice to Mr. Beezer's reputation, to send them in.

It Might Inebriate—But Would It Cheer?

The other day we were putting a couple of new lighting units in a grocery store.

Bill was up on the ladder and I was handing him the reflector, when a woman came in and started to read off her order to the grocer.

"Send me a quart of cider, two cakes of yeast, a box of raisins, a pound of prunes, and—"

"Get this!" whispers Bill.

"And a cake of naphtha soap."

"Hellsbells," says Bill, "I'll never try that one!" —L. T. H.

A Letter from a Customer

Dear C. L. F.:

You and your Professor Fusebox are pretty slick with this stuff about the Fish-Mouse. But I want to ask you: Suppose you have a conduit that branches off into a T or a Y. How is your Fish-Mouse going to know whether to turn to left or right?

—JIMMY.

Good point, Jimmy. In fact, a vital question. And as such it will be taken up by the Professor in a forthcoming article.—EDITOR.

You Bet We Want Contributions

"Will you," inquired a timid voice over our telephone yesterday afternoon at 5:17 p.m., "consider a contribution to THE LIGHTER SIGHED from me?"

We assured the elusive speaker, too modest to give his name, that we would and urged him to send us verse or prose—and if he wrote something that was either verse or prose and he didn't know which or both, to send that too.

And that applies to everybody here. Shoot the good stuff in.

A lot of you, for example, have some valuable experience in the use of the fish-mouse. Let's hear about it, and what, in your opinion, was the mis-adventure which deprived Burlington Beezer of those front teeth.

Mail the good stuff in to the Editor, The Lighter Sighed, care of Electrical Merchandising, 10th Avenue at 36th Street, New York. —C. L. F.

Advance Showing of New *Lightolier* Designs

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